CHAPTER I
INTRODUCTION

Pain is a complex, multidimensional phenomenon. It is a major problem that causes and reduces quality of life. Pain is one of the major reasons that people seek health care. It may be extremely unpleasant and a really personal sensation which will not be shared with others. A thorough understanding of the physiologic and psychosocial dimensions of the pain is an important for effective assessment and management of patients with pain.

The International associations for the study of pain (1998) define pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Pain is categorized as acute pain, chronic pain and cancer related pain. The mechanism of pain includes transduction, transmission, modulation and perception. The multidimensional nature of pain includes the physiologic, affective, cognitive, behavioral and sociacultural influences on pain perception and expression.

The **American Pain Society (2003)** said that pain management is considered as an important part of care that is referred to as "the fifth vital sign" to emphasize its significance and to increase the awareness among health care professionals of the importance of effective pain management. Pain reliving measures is a most fundamental of human right; it is responsibility of the nurse to use best approach to pain management. Nurses have legal and ethical responsibilities for managing pain.

Medications or drugs are administered into the body by several routes. They may be taken by orally, given by injection into intravenously, intramuscularly, into the space around spinal cord, or beneath the skin subcutaneously, placed under the tongue (sublingually), placed in the eye (by the ocular route) or the ear , sprayed into the nose and absorbed through the nasal membranes , breathed into the lungs, usually through the mouth (by inhalation) or mouth and nose (by nebulization), applied to the skin for a local (topical) or body wide (systemic) effect, delivered through the skin by a patch for a systemic effect.

According to WHO (2006), Intra Muscular Injection is an administration of medication penetrably through a skin puncture by a syringe and a needle deep into a large muscle of the body for prophylactic or curative purposes. This route provides faster drug absorption than the subcutaneous route because the muscles have greater vascularity. There are several factors which influence a person's experience of pain during intra muscular injection such as age, gender, culture, anxiety and relieving of factors. These factors may increase or decrease the experience of pain during intra muscular injection process.

There are four sites used for intra muscular injections. They are dorsogluteal muscle, ventro gluteal muscle, vastus lateralis and deltoid muscle. Administering intra muscular injection produces some side effects such as pain at the injection site, allergic reaction, injury to the blood vessels, abscess, nerve damage and muscular atrophy. Among this, localized muscular pain is the most common side effect as a result of intra muscular injection.

A pain producing stimulus sends an impulse across a peripheral nerve fiber. The pain fiber enters the spinal cord and travels one of several routes until ending within the gray matter of the spinal cord. The pain message interacts with inhibitory nerve cells and preventing the pain stimulus from reaching the brain to cerebral cortex. Once a pain stimulus reaches the cerebral cortex the brain interprets the quality of pain and processes information about past experience, knowledge and cultural associations in perception of pain.

The proper administration of intramuscular injection is necessary to minimize discomfort and pain and to achieve maximum therapeutic effect. Although performed routinely by nurses, it is a complex procedure requiring numerous decisions regarding the injection site, volume of drug to be injected, position of the client during injection and methods to keep the site relaxed to reduce pain. Nurses play an important role in minimizing pain and discomfort during an invasive procedure. Pain is more than a single physiological sensation caused by specific stimulus.

Meinhart and Mc Caffery said that "the failure to treat pain is inhumane and constitutes professional negligence". It is an accepted fact that there is reduced pain while giving injection into a relaxed muscle .There are various techniques to keep the muscle relaxed, while giving intramuscular injections such as rotation of the injection site, pinching the area surrounding the needle insertion, applying pressure and so on.

The nurse should use different methods during the intra muscular injection such as tapping the skin, Z-track, applying pressure, applying heat and cold. Application of pressure produces non painful stimuli which block the transmission of painful stimuli to the central nervous system resulting in less pain perception. Tapping the skin is another technique to keep the muscles relaxed. It is an accepted act that there is reduced pain while giving intra muscular injection in to a relaxed muscle. **(George 2007)**

In 1998, Ms. Joanne Helfer made an attempt to alleviate pain due to intra muscular injections by developing Helfer skin tap technique in which tapping of the skin was made over the injection site before and during the procedure. It is an accepted fact that there is reduced pain in giving injection into a relaxed muscle. As well as, Helfer skin tapping technique is one of the mechanical stimulations over the skin that can alter the small diameter fibers which carry pain to the large diameter fibers which do not carry the pain. **(Serena 2010)**

Mechanisms of Helfer skin tap technique

- This technique used for mechanical stimulation of the large diameter muscle fibers diminishes the influence of small pain carrying fibers.
- Gives muscle relaxation.
- Physically decreases the resistance to needle entry and diversion by simultaneous tap of the skin while the needle inserted and removal.

Malkin (2008) said that Helfer skin tap technique offers a painless injection experience. It provides a mechanical stimulation and distraction during intra muscular injection and thus helps to decrease pain as described in gate control theory. In Helfer skin tap technique rhythmic tapping before injection over the skin at the site of injection keeps the muscle relaxed and stimulates large diameter fibers. This technique is allowed while administering intra muscular injection.

BACKGROUND OF THE STUDY

Injections are the most frequently used medical procedure in the world. There are 16 billions intra muscular injections administered every year. In developing countries alone, sixteen thousand million injections are administered annually. Around 5% of injections are administered for immunizing children and adults, and 5% of injections are administered for other procedure like blood transfusions. The remaining 90% of injections are administered into intra muscular route or subcutaneous route. **(WHO 2011)**

In India, Department of Health and Human Service surveyed that 96% of all injections given by private doctors were of antibiotics, vitamins and analgesics. The prevalence of intra muscular injection range between 1.7-11.3 injections per person per year.

US census bureau (2011) estimated 12 billion intramuscular injections were administered throughout the world on an annual basis, of these 5% or less are for immunization and rest are given for curative purposes.

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Institute of the National Academic of America (2010) estimated that 2 million intra muscular injections are given every year.

WHO (2009) a conservative estimate of average number of intra muscular injections ranged from 0.9 to 8.5 injections per person per year, with a median of 1.5 intramuscular injections per person per year.

National Center for Health Statistics, U.S.A. report (2008) indicates that more 1.5 billion people worldwide suffer from severe pain and approximately 3-4.5% of the global people suffer from mild to moderate pain, due to intramuscular injection.

National institute of health (2007) estimated in Chennai there is approximately 0.79% or 7852 million peoples are suffering pain associated with intramuscular injection.

WHO (2006) estimate 16 billion injections are given worldwide. It was estimated that an average each person in the developing countries receive 1.2 billion intramuscular injections per year.

WHO (1999) the prevalence of intra muscular injection in European countries was 5.6-11.3 injection per person per year. The lowest annual numbers of intra muscular injections in America 1.7-1.9 injections per person per year.

United States (2006) pain associated with intra muscular injection among adults. It revealed that adults aged 45-64 years were the most likely to report pain lasting more than 24 hours (30%), (25%) of young adults of age group 20-44 years reported pain lasting more than 12 hours, and adult age group 65 years and over reported pain lasting more than two days .

A study was conducted in US, an emergency room nurse regarding painless injection technique. The investigator tapped the gluteus muscle before inserting the needle and while removing the needle. Study concluded that Helfer skin tap technique patient experienced less pain while receiving intramuscular injection. (Meyer 2011)

Pain management is an integral part of nursing. Nurses have more responsibility to manage the pain of the patient. Nurses are playing an important role in minimizing the pain and discomfort during any invasive procedure. The nurse can minimize the discomfort and pain during intra muscular injection in the client by providing a proper position and implementation of different physical and psychological interventions.

SIGNIFICANCE AND NEED FOR THE STUDY

Intra muscular injection is a painful procedure, the experience of pain is different from one person to another person. Effective cognitive technique is thought of stimulating the descending control system, resulting in fewer painful stimuli being transmitted to the brain. So the clients have more fear of injection. The nurse can attempt to minimize discomfort by following certain technique. Nurse can divert the client's attention from the injection through conversation and different method used to administer the injection. Pain relief generally increases in direct proportion to the patient's active participation, the number of sensory modalities used, and interest in the stimuli. An intra muscular injection is one of the most common nursing procedures carried out by nurses. Many of the medications and immunization are given through intra muscular route.

Amira Ahmad (2016) conducted an experimental study to evaluate of effectiveness of Helfer skin tap technique on pain intensity as perceived by the patient receiving intra muscular injection in medical and surgical units at Main Mansoura university hospital. The study was quasi experimental research design was used.the purposive sampling technique used total sample size was 100. each patients was administered repeated intra muscular injections at gluteal site. The pain was assessed by numerical pain scale. The study concluded that Helfer skin tap technique was more effective in reducing the intra muscular injection pain.

Issac Austin (2014) conducted an experimental study to evaluate the effectiveness of Helfer skin tapping technique pain during administration of intra muscular injection in Apollo hospital, Madurai. The simple random sampling technique with lottery method was used, 80 samples were assigned for study group and 80 samples were assigned for control group. The study group received intra muscular injection using Helfer skin tapp technique and the control group received intra muscular injection using routine procedure method.

The structured interview schedule, and visual analogue scale were used. The study concluded that the pain during intra muscular injection greatly reduced by using Helfer skin tap technique.

Serena (2010) conducted an experimental study to assess the effect of Helfer skin tapping technique on pain perception during intra muscular injection in selected hospital, New Delhi. The total sample size is 60 adult patients. 30 adult patients were receiving inj.Tramadol 50mg and another 30 patients were receiving inj.piroxicam 40mg.Pain assessment was done by using 0-10 numerical pain scale. The mean pain intensity by using skin tap technique (1.5 ±1.1) was much lower than the routine techniques. The study concluded that Helfer skin tap technique was more effective than the routine technique.

During the clinical visit the investigator identified that patients receiving intra muscular injections have more pain perception. So the investigator had the interest to implement Helfer skin tap technique to reduce the pain perception during intra muscular injection. This study aims in establishing the effectiveness of Helfer skin tap technique in reducing level of pain perception among the patients during intra muscular injection.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of Helfer skin tap technique on pain perception among patients receiving intra muscular injection in selected hospital, at Kanyakumari District.

OBJECTIVES

- To assess the post test level of pain perception among the patients receiving intra muscular injection in study group and control group.

- To evaluate the effectiveness of Helfer skin tap technique on level of pain perception among patients receiving intra muscular injection in study group and control group.

- To find out the association between the post test level of pain perception among the patients receiving intra muscular injection with their selected demographic variables in study group and control group.

HYPOTHESES

H_1 - There is a significant difference between post test level of pain perception among the patients receiving intra muscular injection in study group and control group.

H_2 - There is a significant association between post test level of pain perception among the patients receiving intra muscular injection with their selected demographic variables in study group and control group.

OPERATIONAL DEFINITIONS

Effectiveness

It is the capability of producing a desired result or the ability to produce a desired output.

- Peter F Drucker (2006).

It refers to outcome of the Helfer skin tap technique on pain perception among the patients receiving intra muscular injection.

Helfer skin tap technique

Skin tap is an effective technique for reduction of pain response during injection.

Jose Rose Mary (2012).

It is a technique in which the investigator taps the intra muscular injection site by using the palmer aspects of fingers 16 times before the insertion of needle and 3 counts while removing the needle.

Pain perception

It means the sensory process that occurs when a stimulus for pain is present.
It includes the person's interpretation of the pain.

Carol Taylor.

It refers to an unpleasant feeling caused by intense or damaged stimuli experienced by patients during intra muscular injection as measured by numerical pain scale after one minute of administration.

Patients

A patient is a person who is receiving medical treatment from a doctor or hospital.

Oxford Dictionary.

It refers to LSCS mothers between the age group of 20-35 years who are receiving intra muscular injection**.**

Intra Muscular injection

Intra muscular injections deliver medication through the skin and subcutaneous tissues into certain muscles.

Carol Taylor.

Inj.Od-com 50mg|IM bd administered through the dorso gluteal region.

ASSUMPTION

Helfer skin tap technique may reduce the pain during the intra muscular injection.

DELIMITATION

- The study was delimited for a period of four weeks.
- The study was delimited to the patients receiving intra muscular injection only.
- The study was delimited to the sample size 50.

PROJECTED OUTCOME

The findings of the study will motivate the nurses to apply the Helfer skin tap technique to reduce the pain during administration of intra muscular injection.

CONCEPTUAL FRAMEWORK

WIDENBACH'S PRESCRIPTIVE HELPING ART OF CLINICAL NURSING THEORY (1964)

The conceptual framework (or) model is a phenomenon made up of concepts that are the mental images of a phenomenon. A model is used to denote symbolic representation of concepts.

This study intends to evaluate the effectiveness of Helfer skin tap technique among the patients receiving intra muscular injection. The investigator adopted the Ernestine **Widenbach's Prescriptive Helping Art of Clinical Nursing Theory (1964)**.
Widenbach's prescriptive theory directs action towards an explicit goal. According to this theory, nursing practice consists of three steps which include,

Step 1- Identifying the need for help

Step 2- Ministering the needed help

Step 3- Validating that the need for help was met.

Step 1- Identifying the need for help

In this study the investigator identifies the need for help by assessing the demographic variables. (Annexure VI)

Step 2- Ministering the needed help

Ministering the needed help refers to the provision of required help to fulfill the identified needs. It has 2 components.

Prescription and Realities

Prescription: In this study prescription refers to Helfer skin tap technique.

Realities refers to

- Agent: The investigator who renders Helfer skin tap technique.
- Recipient: Patients receiving intra muscular injection.
- Goal: To reduce the intra muscular injection pain.
- Means and activity: Providing Helfer skin tap technique.
- Framework : Denotes the setting in which the care is rendered.(P.P.K.Hospital)

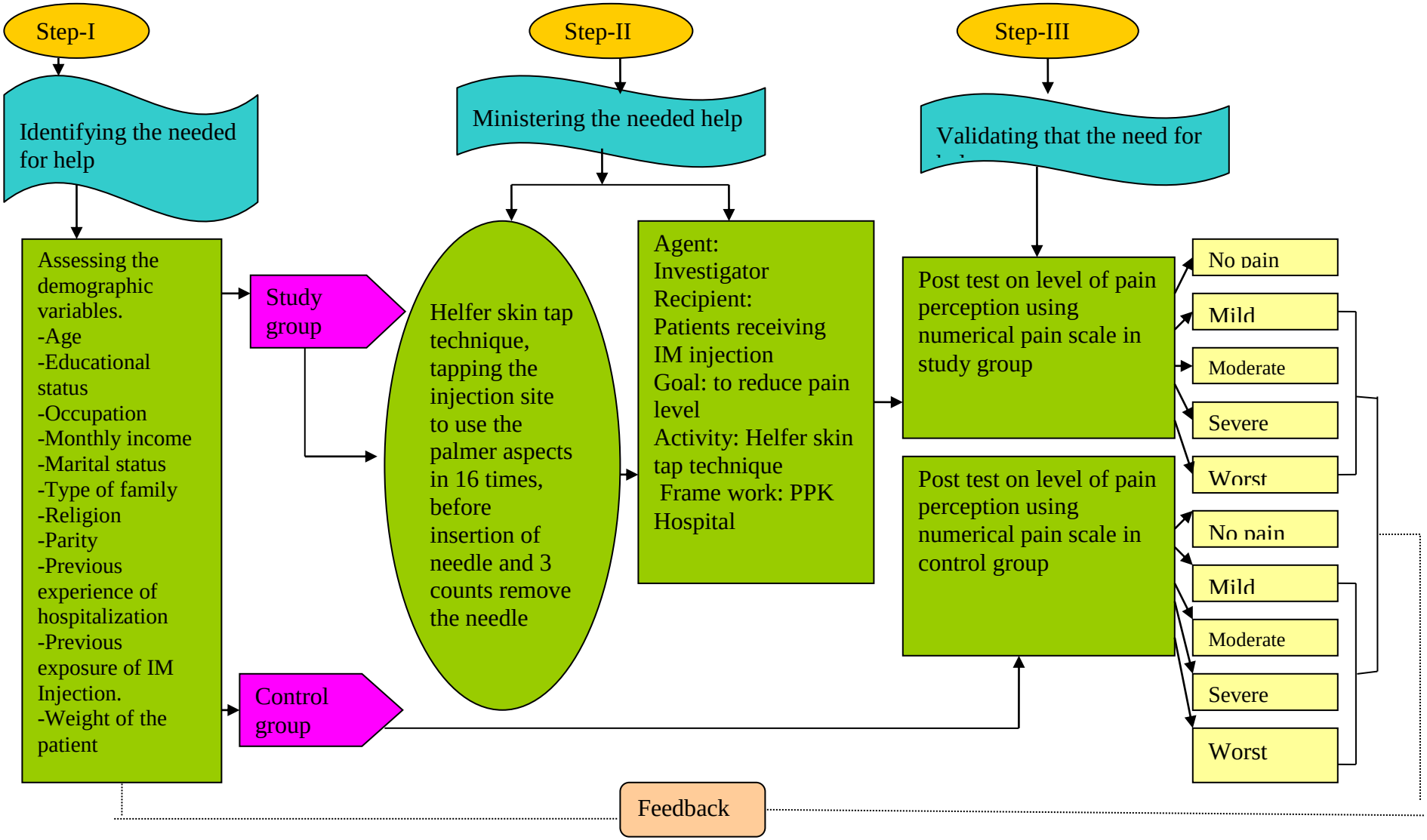
Step 3: Validating that the need for help was met

This step involves the assessment of level of intra muscular injection pain after rendering Helfer skin tap technique. Post test involves the assessment of the level of intra muscular injection pain perception by numerical pain scale (Annexure VI). The level of intra muscular injection pain is categorized as no pain, mild, moderate, severe and worst pain. Two possible outcomes are reduction in the level of intra muscular injection pain in

the study group and no reduction in the level of intra muscular injection pain in control group.

Feed back

During my study, for study group samples performed Helfer skin tap technique to reduce pain perception during intra muscular injection. It was evaluated by using numerical pain scale stated that mild and moderate level of pain perception by the samples of study group.


Step-I
Identifying the needed for help
Step-II
Ministering the needed help
Step-III
Validating that the need for
Assessing the demographic variables.
-Age
-Educational status
-Occupation
-Monthly income
-Marital status
-Type of family
-Religion
-Parity
-Previous experience of hospitalization
-Previous exposure of IM Injection.
-Weight of the patient
Study group
Control group
Helfer skin tap technique, tapping the injection site to use the palmer aspects in 16 times, before insertion of needle and 3 counts remove the needle
Agent: Investigator
Recipient: Patients receiving IM injection
Goal: to reduce pain level
Activity: Helfer skin tap technique
Frame work: PPK
Hospital
Post test on level of pain perception using numerical pain scale in study group
Post test on level of pain perception using numerical pain scale in control group
No pain
Mild
Moderate
Severe
Worst
No pain
Mild
Moderate
Severe
Worst
Feedback

CHAPTER II
REVIEW OF LITERATURE

This chapter is designed to include the review of literature. The review of literature entails the systematic identification, reflection, criteria analysis and reporting of existing information in relation to the problem.

The review of literature presented in this chapter is organized systematically in the following manner.

Review of literature as follows:

Section A Studies related to intra muscular injection.

Section B Studies related to other therapies to reduce intra muscular injection pain.

Section C Studies related to Helfer skin tap technique on intra muscular injection pain.

STUDIES RELATED TO INTRAMUSCULAR INJECTION

Dilek Kara et al., (2013) conducted a comparative study to evaluate the effectiveness of dorsogluteal or ventrogluteal site which is more painful in intra muscular injection among the adults in state hospital at Turkey. The total sample size contained 70 adult patients. The one group received Inj.Diclofenac sodium in ventro gluteal site and other group is received Inj.Diclofenac sodium in Dorso gluteal site. The pain was assessed using visual analogue scale. The study revealed that the average pain score of patient after injections to the ventro gluteal site was less than the pain comparing to dorso gluteal site. The study concluded the intra muscular injection of diclofenac administered to the ventro gluteal site has less pain.

Praya Pathaketal (2012). conducted a study to investigate the effect of needle gauge on perception of pain intensity among the patients receiving hepatitis vaccination in India. The total sample size was 320 adult patients. The Group I contained 160 patients receiving Hepatitis vaccination in 23 G needle and Group II had 160 patients receiving hepatitis vaccination in 25 G needle. The pain was assessed using numerical pain scale.

The study revealed that there is a significance difference in the two groups. The study concluded that 23 G needle causes less pain during hepatitis vaccination.

Naham. et al., (2012) conducted a study to evaluated the influence of patients on the characteristics of pain perception due to intra muscular injection vaccine injection in healthy adult volunteers. The total sample is 160 patients in 65 males and 95 females were in the study. The injection of hepatitis B vaccine using 24mm; 24G needle was performed as a uniform stimulus in all the patients. The pain was measured by using a 100mm visual analogue score. The statistical average score was 20.4 ±17.1 in males and 34.4 ±19.7 in females in the level of significance ($p \leq 0.001$). The study concluded that there is no correlations between age, body mass index or maximal pain score from previous experience.

Kusumadevi. et al., (2010) conducted a comparative study to assess the perception of intra muscular injection pain in men and women. The study conducted at Victoria Hospital, Bangalore. The total sample size 300 it assigned 140 men and 160 women. All the patients received multivitamin intra muscular injection in the gluteal region using 23G needle. Pain was assessed by visual analogue scale. The statistical analysis with higher pain score was observed in women (2.24 ± 1.19) with compared to men (1.7 ± 1.06). The study concluded that women had an increased sensitivity to pain during intra muscular injection.

Leyla Ozdemir. et al., (2010) conducted a study to assess the effectiveness of methylprednisolone injection speed on the perception of intra muscular injection pain. The study conducted in university hospital in a major city in Turkey. The total sample size was 25 patients and quasi experimental design was used for one group. The first dose of Inj.Methylprednisolone is administered to all study participants in 10 seconds, 24 hrs after the first injection the second dose is administered in 30 seconds. The data were collected using the patient's characteristics form and the visual analogue scale. The data were analyzed using the SPSS 11.5. The mean pain level 10 second speed of injection

administration is 1.9 and 30 second speed of injection administration is 1.3. The study concluded that slow intra muscular injections of steroids reduce the injection pain.

STUDIES RELATED TO OTHER THERAPIES TO REDUCED INTRA MUSCULAR INJECTION PAIN

Tugrul Emel. et al.,(2017) conducted a study to assess the effectiveness of shot blocker on relief of pain due to Hepatitis B vaccine injection into Deltoid muscle in the first grade students studying at a school of health in nursing and midwifery department of university. The total sample size is 242 participants. The study was randomized – controlled and single blind design. The shot blocker technique was used during the vaccination in study group and routine technique is used during the vaccination in control group. The pain was assessed using visual analogue scale. The mean score study group is 33.8±26.0 and the control group is 33.0±23.8 with statistically significant. The study concluded that shot blocker technique is effective in reducing the intra muscular injection pain.

Rasha H.Ramadan.,(2016) conducted a study to investigate the effects of cryotherapy on pain intensity among the adult patients receiving intra muscular injections in medical departments at Mansoura university Hospital. The objective is to evaluate the effect of cryotherapy on pain intensity among the adult patients receiving intra muscular injection. The total sample size was 100 patients. Quasi-experimental time series design was used. The study group received Inj.Neurovit using cryotherapy and the control group was received Inj.Neurovit using routine method. The pain was assessed using universal pain assessment tool. The study concluded that cryotherapy reduced pain during receiving intra muscular injection.

Romano. et al.,(2015) conducted a study to evaluate the effectiveness of using pin prick method for relief of pain during intra- muscular and subcutaneous injections in New Delhi. The 212 patients were randomly assigned to 2 groups. 106 patients in study group received intra-muscular and subcutaneous injections with the application at the blunt pins

and 106 patients in the control group received with a placebo device. The pain assessment was done by visual analogue scale. After the intra muscular injection, mean value is 88.5% of the patients in the study group and 11.4% of the patients in control group. After subcutaneous injections, mean value is 95.1% of the patients in the study group and 9.8% of the patients in control group the pain as <1. The study concluded that pin prick method is more significant at the time of Intra muscular or subcutaneous injection.

Vikram S. Kumar., (2014) conducted a study to assess the effectiveness of cough trick technique in reducing prick pain patient receiving intra muscular injection in the selected hospital at Karnataka. The purposive sampling technique used sample size was 50 patients. The study group was assigned 25 patients for intra muscular injection with cough track technique and the control group was assigned 25 patients for intra muscular injection with out cough track technique. The pain was assessed using visual analogue scale. The mean reported of study group is 54.9% and control group is 31.9%. The study concluded that cough track technique is effective for the reduction of pain during intra muscular injection.

Mariya babu., (2010) conducted a study to evaluate the effectiveness of cold needle on perception of pain during intra muscular injection in the selected hospital at Bangalore. The non probability convenient sampling technique used total sample size was 60. Cress over design was used. The group I received the first injection with the standard technique and group II received the first injection with the cold needle technique. Further Group I received the second injection with the cold needle technique and Group II received the second injection with the standard technique. The pain was assessed using numerical pain rating scale. The study concluded that cold needle technique was more effective in reducing the intra muscular injection pain.

Negin Masoudi Alavi., (2007) conducted a study to assess the effectiveness of acupressure to reduce pain in intra muscular injection. The study was cross over single blind experimental design. The total sample size was 64 patients, who were prescribed penicillin for two doses daily. Each patient received an injection with acupressure applied

to one buttock and an injection without acupressure to the other buttock. The pain was measured by visual analogue scale. The mean score of injection with acupressure injection is 3±2 and the injection without acupressure is 5±2. The result showed that the pain intensity was at average 2.5 lower in the acupressure group with compared to ordinary injection. The study concluded that the acupressure can reduce the intra muscular injection pain.

STUDIES RELATED TO HELFER SKIN TAP TECHNIQUE ON INTRA MUSCULAR INJECTION PAIN

Vathani., (2017) conducted a study to evaluate the effectiveness of Helfer skin tap technique on pain reduction among the patients receiving intra muscular injection in JIPMER, Puducherry. The sample was chosen by simple random sampling technique, in which 67 patients in study group received intra muscular injection using Helfer skin tap technique and 67 patients in control group received intra muscular injection using routine technique. The tool was structured interview questionnaires and numerical pain rating scale. The findings of the study among the post test pain score in study group and control group (0.67± 1.17 vs. 4.95± 1.77) were found to be statistically highly significant at $p \leq 0.001$ level. The results indicated that Helfer skin tap technique is more effective in reducing intra muscular injection pain.

Hassnein soliman.et al., (2016) conducted an experimental study to evaluate the effectiveness of Helfer skin tapping technique on reducing pain intensity associated with intra muscular injection in medical and surgical units at main Mansoura University Hospital. The sample was chosen by purposive sampling technique and total sample size was 100 patients. 50 patients from study group received intra muscular injection with Helfer skin tapping technique and control group 50 patients received intra muscular injection using routine technique. Quasi experimental research design and assessment of pain level with universal pain assessment tool were used. The results show that 17% report no pain, 6% have worst pain on application of routine technique, while 40% report no pain, 2% report worst pain with applying Helfer skin tapping technique. The study concluded

that Helfer skin tapping technique was more effective in reducing intra muscular injection pain.

Omima said M.H. ., (2016) conducted a study to assess the effectiveness of Helfer skin tapping technique and Z-track technique on pain intensity among the hospitalized adult patients who received intra muscular injection in medical surgical department at Manoufia University Hospital. The total sample size was randomly 100 which were alternatively divided into two equal groups. The study group I received Inj. Neurovit using Helfer skin tap technique and study group II received Inj.Neurovit using Z-track technique. The tool used to structured interview questionnaire and universal pain assessment scale. The study concluded that there is no statistical difference between Helfer skin tap technique and Z track technique.

Dhanalakshmi., (2015) conducted a study to assess the effectiveness of Helfer skin tap technique on pain perception of pain during intra muscular injection among the post operative adult orthopedic patients in selected hospital at Madurai. The total sample size was 60, in which 30 patients were assigned group I Inj. Tramadol was administered using Helfer skin tap technique and next dose was administered standard technique. In other 30 patients were assigned group II Inj.Tramadol using standard technique and next dose was administered using Helfer skin tap technique. The pain was assessed using numerical pain scale. The study reported that patient 86% in the study group I and 90% in the study group II perceived moderate pain using standard technique. 90% in the study group I and 83% in study group II perceived only mild pain with Helfer skin tap technique. The study concluded that Helfer skin tap technique is more effective to reduce intra muscular injection pain.

Maria Theresa., (2012) conducted a study to evaluate the effectiveness of Helfer skin tap technique and routine technique on pain reduction among the patients receiving intra muscular injection in Government General Hospital Puducherry.The simple random sample technique used with 50 patients are selected. In 25 subjects were for intra muscular injection using Helfer skin tap technique followed by routine technique for the next dose of

injection. Other 25 patients were first assigned intra muscular injection using routine technique followed by Helfer skin tap technique for the next dose of injection. The subjects were examined with 4 variables viz pain, systolic and diastolic blood pressure and pulse rate. The intervention was implemented for four continuous days for both the groups. The study concluded that the perception of pain intensity is reduced during the patient receiving intra muscular injection using Helfer skin tap technique.

Saleena Shah. et al., (2011).conducted a study to assess the effectiveness of Helfer skin tapping technique on pain among the patients receiving intra muscular injection, on orthopedic wards of Govt. Medical College Kozhikode, Kerala. The purposive sampling technique used sample size was 82 patients. Quasi experimental cross over design was used. 82 patients were assigned for two groups. The group I received Inj. voveran using Helfer skin tapping technique and group II received Inj. voveran using following the routine method. The structured interview schedule, numerical pain intensity scale and visual analogue scale were used. The result showed that 91.5% of patients had moderate and 6.1% had severe pain during intra muscular injection using routine method, while 78.5% of patient had mild pain, 21.5% of patient had moderate pain during intra muscular injection using Helfer skin tapping technique. The study concluded that Helfer skin tapping technique is more effective in reducing level of pain during intra muscular injection.

CHAPTER III

METHODOLOGY

RESEARCH APPROACH

The researcher adapted quantitative research approach.

RESEARCH DESIGN

Quasi experimental design was used in this study.

The diagrammatic representation of this design is as follows:

Group	Intervention	Post test
Study group	X	O
Control group	-	O

X- Helfer skin tap technique.

O – Post test in study group and control group.

VARIABLES

- Independent variable: Helfer skin tap technique.
- Dependent variable: Pain perception.

RESEARCH SETTING

The study was conducted in P.P.K. Hospital which is a 300 bedded Multispeciality Hospital at Marthandam, Kanyakumari District. It is located 35 kilometers away from St. Xavier's Catholic College of Nursing, Chunkankadai. It has all facilities such as Casualty, Labour Ward, Operation Theatre, Antenatal Ward, Postnatal Ward, Post – operative ward and other specialties. The Hospital records 70-80 normal deliveries, 50-60 Lower Segmental Cesarean Section Deliveries and 5-10 instrumental deliveries per month. Totally 140-160 deliveries were conducted per month.

POPULATION

Target population: The populations under study constituted all the patients who were receiving Intra Muscular Injection.

Accessible population: LSCS patients who were receiving Intra Muscular Injection within the age group of 20 to 35 years.

SAMPLE

In this study the sample consists of women who had undergone LSCS between the age group of 20 to 35 years who fulfilled the inclusion criteria and admitted in the post operative ward of PPK Hospital, Marthandam.

SAMPLE SIZE

These samples were calculated by using Slovins formula $(n=N/1+Ne^2)$ n=50. The sample size consists of 50. 25 patients were in study group and 25 patients were in control group.

SAMPLING TECHNIQUE

Purposive sampling technique was used for selecting the sample.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

- LSCS mothers between 20-35years who were receiving Intra Muscular Injection (inj.OD-CON 50mg) from second post operative day.
- Primi and multi para mothers who underwent LSCS.

Exclusion Criteria

- Mothers who had normal delivery.
- Patients with chronic pain associated with systemic disease condition like cardiomyopathy and arthritis.
- Sedated, critically ill and unconscious patients.

- Patients who had undergone painful procedures such as biopsy and endoscope procedures within 1 hour of the study.

DESCRIPTION OF TOOL

It consists of two parts.

Part –I

In this part, structured questionnaire was used to collect the demographic variables such as age, educational status, occupation, monthly income, marital status, type of family, area of residence, religion, parity, previous experience of hospitalization, previous exposure of intra muscular injection and weight of the patient.

Part-II

Numerical pain scale was used to assess the level of pain.

The scoring is as follows:

0: No pain

1-3: Mild pain

4-6: Moderate pain

7-9: Severe pain

10: Worst pain

DESCRIPTION OF INTERVENTION

Step I

Sampling was done based on the inclusion and exclusion criteria. The demographic data was collected after getting the oral consent from the LSCS patients.

Step II

The investigator explained the importance of Helfer skin tap technique to study group. The study was conducted in the post operative ward at PPK Hospital. Provided

privacy to the patient. Loaded the medication from an ampule (Inj.OD-COM 50mg). Placed the patient in proper position and identified site by using landmarks (Dorso gluteal site). Cleaned the injection site with spirit swab to remove the surface bacteria. The uncapped syringe to be held in the dominant hand and the nondominant hand tap the muscle which intended to use the palmer aspect of the fingers 16 times before the administration of drugs. After skin tapping insert the needle at a 90 degree angle into the muscle. Administered medication slowly and removed the needle by counting of 1 to 3.

Step III

Post test was done by using numerical pain scale. Pain perception was assessed after the administration of injection within one minute.

Step IV

Data was collected, analyzed and tabulated by descriptive and inferential statistics.

CONTENT VALIDITY AND RELIABILITY

The content was validated by five experts including one physician and four Nursing personals. The experts were requested to give their opinions. As per their suggestions standardized numerical pain scale was used for this study.

PILOT STUDY

The purpose of pilot study was conducted to find out the feasibility and practicability of the study and to finalize the tool. After obtaining initial permission from the college and the Administrator of the Hospital, the pilot study was conducted in PPK Hospital Kanyakumari district, Tamilnadu. The pilot study was conducted among 10 patients splitting into 5 in study groups and 5 in control group. Study group received the Helfer skin tap technique and control group did not receive Helfer skin tap technique. The pilot study helped to understand the feasibility of the study. Analysis of the data was done by using descriptive and inferential statistics. The tool and instrument were found feasible

and practicable. Helfer skin tap technique was effective to reduce the level of pain perception among patients receiving intra muscular injection.

METHOD OF DATA COLLECTION

Phase I Selection of LSCS patients

After obtaining formal permission from the Principal of St. Xavier's Catholic College of Nursing, Chunkankadai and Administrator of P.P.K Hospital, Marthandam, the participants were selected based on the inclusion and exclusion criteria. The investigator obtained oral consent from each patient and proceeded with data collection.

Phase II Intervention

The investigator established good rapport with the selected patients. Brief information about benefits of Helfer skin tap technique was given to the patients. The study group, before administering intra muscular injection, the site was tapped with the palmer aspect of the fingers 16 times. The needle was inserted at 90 degree angle into the muscle. In control group, the injection was administered using routine technique.

Phase III Post test

The post test was conducted for both groups using numerical pain scale. Analysis of the data was done by using descriptive and inferential statistics.

PLAN FOR DATA ANALYSIS

Data collected were analyzed using both descriptive and inferential statistics such as mean, standard deviation, chi- square and unpaired't' test.

Descriptive Statistics

- The frequency and percentage distribution of was used to describe the demographic variables, and level of pain perception among patients receiving intra muscular injection in study and control group.
- Mean and standard deviation was used to compare the post test level of pain perception among patients who received intra muscular injection in study and control group.

Inferential Statistics

- Unpaired‘t’ test was used to compare post test level of pain perception among the patients receiving intra muscular injection in study group and control group.
- Chi- square test was used to find out the association between post test level of pain perception among the patients receiving intra muscular injection with their selected demographic variables in study group and control group.

ETHICAL CONSIDERATION

The proposed study was conducted after the approval of the dissertation committee of St. Xavier’s catholic College of Nursing permission was obtained from Mr. Mathivanan, MBA, Administrator, P.P.K, Hospital Marthandam, (Annexure-II). Oral consent was obtained from each patient before starting data collection. Assurance was given for the confidentiality of the data collected.

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CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collected among patients receiving intra muscular injection. This chapter also represents the findings of the study. The data collected from the samples were tabulated, analyzed and preserved in the table and interpreted under the following sections based on the objectives and hypotheses of this study.

This chapter divided into three sections.

Section A

1. Distribution of demographic variables among patients receiving intra muscular injection in study group and control group.

1.1 Frequency and percentage distribution of demographic variables among patients receiving intra muscular injection in study group and control group.

Section B

2. Level of pain perception among patients receiving intra muscular injection among study group and control group:

2.1 Post test frequency and percentage distribution on level of pain perception among patients receiving intra muscular injection in study group and control group.

Section C

3. Comparison of post test level of pain perception among patients receiving intra muscular injection in study group and control group.

3.1 Comparison of post test level of pain perception among patients receiving intra muscular injection in study group and control group.

Section D

4. Association between the post test level of pain perception among patients receiving intra muscular injection with their selected demographic variables in study and control group.

4.1 Association between the post test level of pain perception among patients receiving intra muscular injection in study group with their selected demographic variables.

4.2 Association between the post test level of pain perception among patients receiving intra muscular injection in control group with their selected demographic variables.

SECTION: A

DISTRIBUTION OF DEMOGRAPHIC VARIABLES AMONG PATIENTS RECEIVING INTRA MUSCULAR INJECTION IN STUDY GROUP AND CONTROL GROUP. (ANNEXURE VI)

Table 1: Frequency and percentage distribution of demographic variables among patients receiving intra muscular injection in study group and control group.

N=50

S.No.	Demographic variables	Study group n=25		Control group n=25	
		f	%	f	%
1.	Age				
	a)20-25 years	13	52	8	32
	b)26-30 years	7	28	11	44
	c)31-35 years	5	20	6	24
2.	Educational status				
	a)Illiterate	-	-	-	-
	b)School education	6	24	8	32
	c)Graduate	19	76	17	68
3.	Occupation				
	a)Sedentary worker	10	40	12	48
	b)Moderate worker	14	56	13	52
	c)Heavy worker	1	4	-	-
4.	Monthly Income				
	a)Rs. 5000- Rs. 10000	9	36	12	48
	b)Rs.10001-Rs.15000	9	36	9	36
	c)More than Rs.15000	7	28	4	16
5.	Marital status				
	a)Married	25	100	25	100
	b)Divorced	-	-	-	-
	c)Widow	-	-	-	-
6.	Type of family				
	a)Nuclear	14	56	11	44
	b)Joint	11	44	14	56
	c)Broken	-	-	-	-

7.	Area of Residence a)Urban b)Rural	 14 11	 56 44	 7 18	 28 72
8.	Religion a)Christian b)Hindu c)Muslim	 13 11 1	 52 44 4	 13 12 -	 52 48 -
9.	Parity a)Primipara b)Multipara	 18 7	 72 28	 11 14	 44 56
10.	Previous experience of hospitalization a)Yes b)No	 17 8	 68 32	 18 7	 72 28
11.	Previous exposure of intramuscular injection a)Yes b)No	 - 25	 - 100	 - 25	 - 100
12.	Weight of the patient a)Less than 55kg b)56-65kg c)Above 65kg	 4 12 9	 16 48 36	 6 12 7	 24 48 28

Table 1.represents the frequency and percentage distribution of demographic variables among patients receiving intra muscular injections in study group and control group. According to the age 13(52%) belongs to age group of 20 – 25 years, 7(28%) belongs to age group of 26 – 30 years, 5(20%) of patients receiving intra muscular in the age group of 31 – 35 years in study group. In control group 8(32%) belongs to age group of 20 – 25 years, 11(44%) belongs to age group of 26 – 30 years, 6(24%) belongs to age group of 31 – 35 year.

Regarding to educational status, none were illiterate, 6(24%) were in school education, 19(76%) were graduate in study group. Likewise in control group none were illiterate, 8(32%) were school education, 17(68%) were graduate.

Analyzing to occupation on study group, 10(40%) were sedentary workers, 14(54%) were moderate workers, 1(4%) were heavy workers. Likewise in control group 12(48%) were sedentary workers, 13(52%) were moderate workers, none were heavy worker.

With regard to income on study group, 9(36%) of them are Rs 5000 – Rs 10000, 9(36%) of them are Rs 10001 – Rs 15000, 7(28%) of them are more than Rs 15000.Likewise in control group 12(48%) of them are Rs 5000 – Rs 10000, 9(36%) of them are Rs 10001 – Rs 15000, 4(16%) of them are more than Rs 15000.

Analyzing to marital status on study group, 25(100%) were married, none were divorced, none were window. Likewise in control group 25(100%) were married, none were divorced, none were window.

Regarding to type of family on study group 14(56%) of them are nuclear family, 11(44%) of them are joint family, 0% of them are broken family. whereas in the control group 11 (44%) of them are nuclear family, 14(56%) of them are joint family, none of them are broken family.

Analyzing to area of residence on study group, 14(56%) of them are urban, 11(44%) of them are rural. Whereas in the control group 7(28%) of them are urban, 18(72%) of them are rural.

Regarding to religion in study group, 13(52%) of them are Christian, 11(44%) of them are Hindu, 1(4%) of them are Muslim. Whereas in the control group, 13(52%) of them are Christian, 12(48%) of them are Hindu, 0% of them are Muslim.

With regards to parity on study group, 18(72%) were primi para, 7(28%) were multi para. Whereas in control group 11(44%) were primi para, 14(56%) were multi para.

Analyzing to pervious experience of hospitalization on study group, 17(68%) of them are yes, 8(3%) of them are no. Whereas in the control group 18(72%) of them are yes, 7(28%) of them are no in control group.

Regarding to pervious exposure of intra muscular injection in study group, none were yes, 25(100%) were no. Whereas in the control group, 0% were yes, 25(100%) were no in control group.

With regards to weight of the patient in study group, 4(16%) were less than 55kg, 12(48%) were 56 – 65 kg, 9(36%) were above 65 kg. Whereas in the control group 6(24%) were less than 55 kg, 12(48%) were 56 – 65 kg, 7(28%) were above 65 kg in control group.

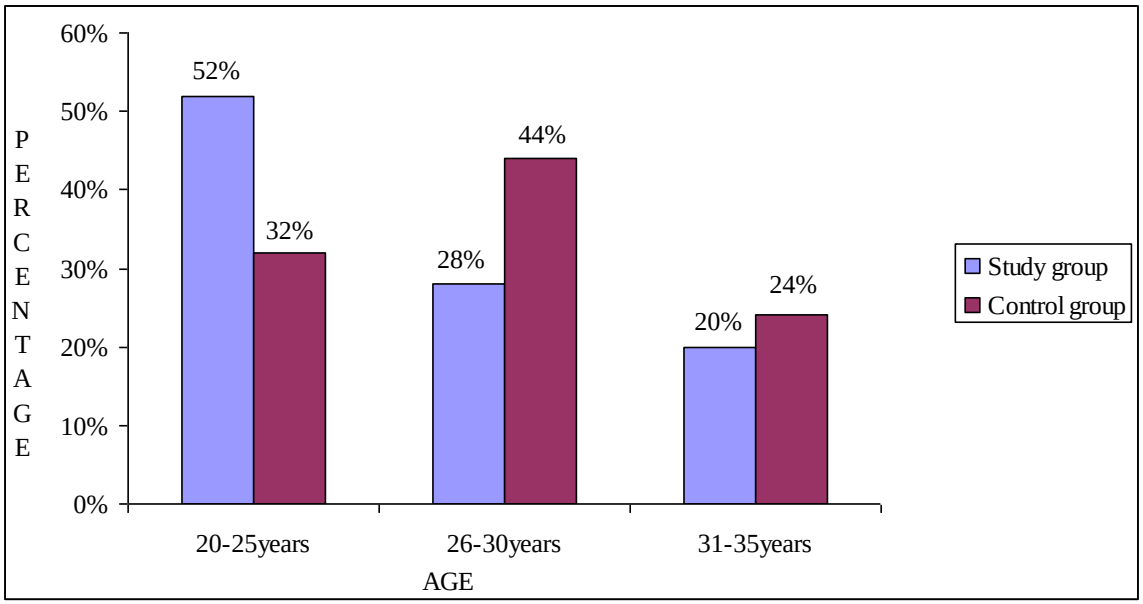

Fig 2.1 Percentage distribution of age among patients receiving intra muscular injection

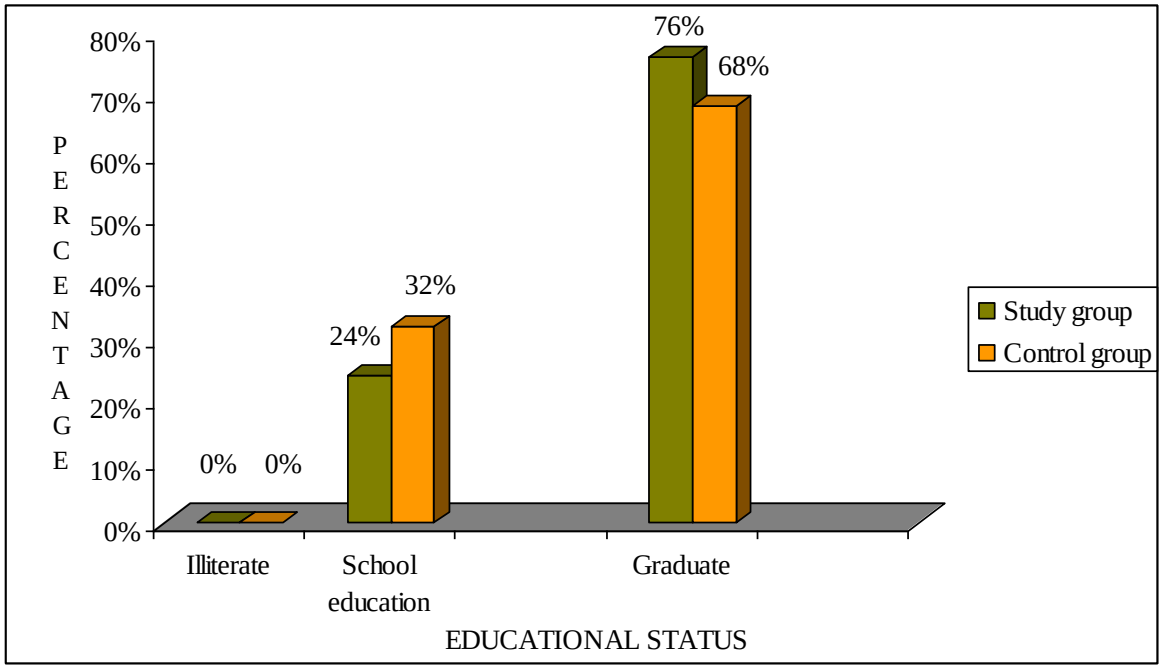

Fig.2.2 Percentage distribution of educational status among patients receiving intramuscular injection

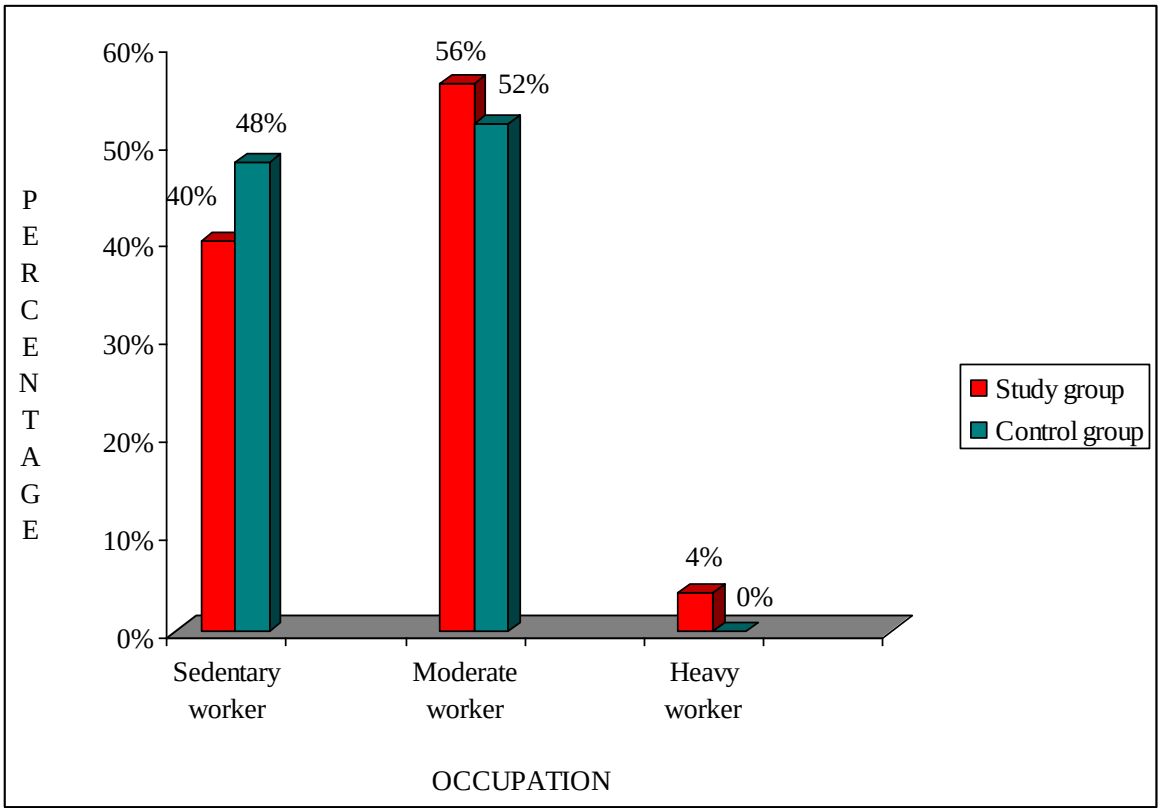

Fig2.3 Percentage distribution of occupation among patients receiving intra muscular injection

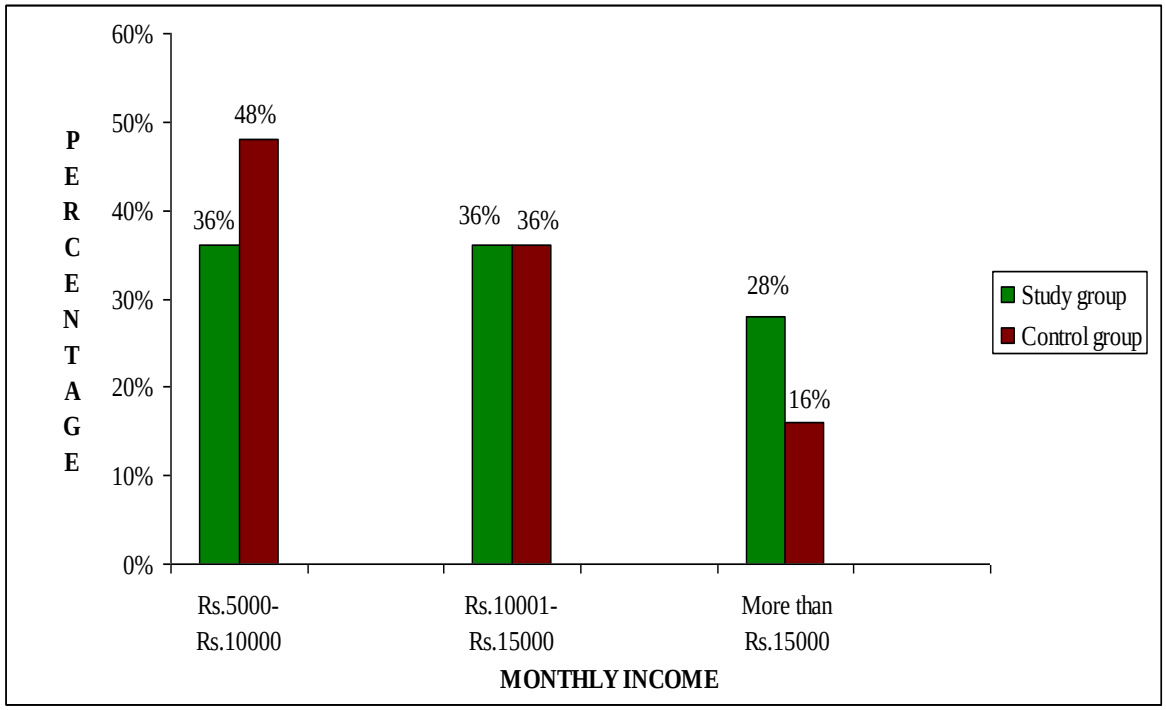

Fig 2.4 Percentage distribution of monthly income among patients receiving intra muscular injection.

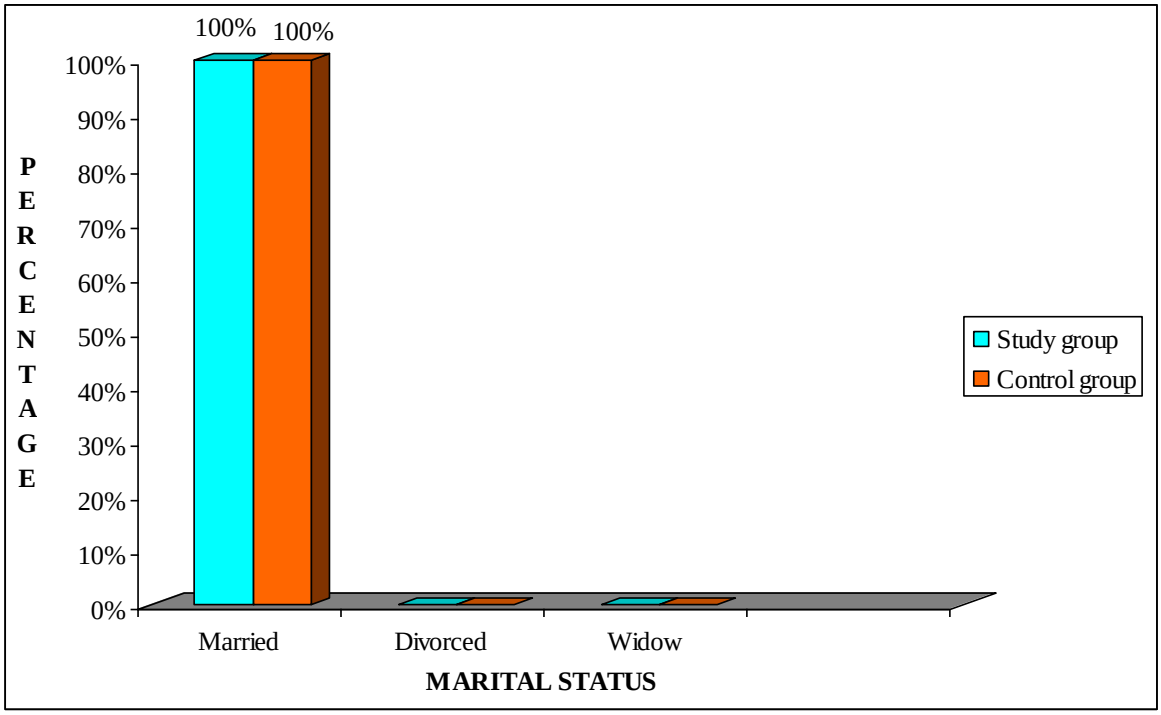

Fig 2.5 Percentage distribution of marital status among patients receiving intra muscular injection.

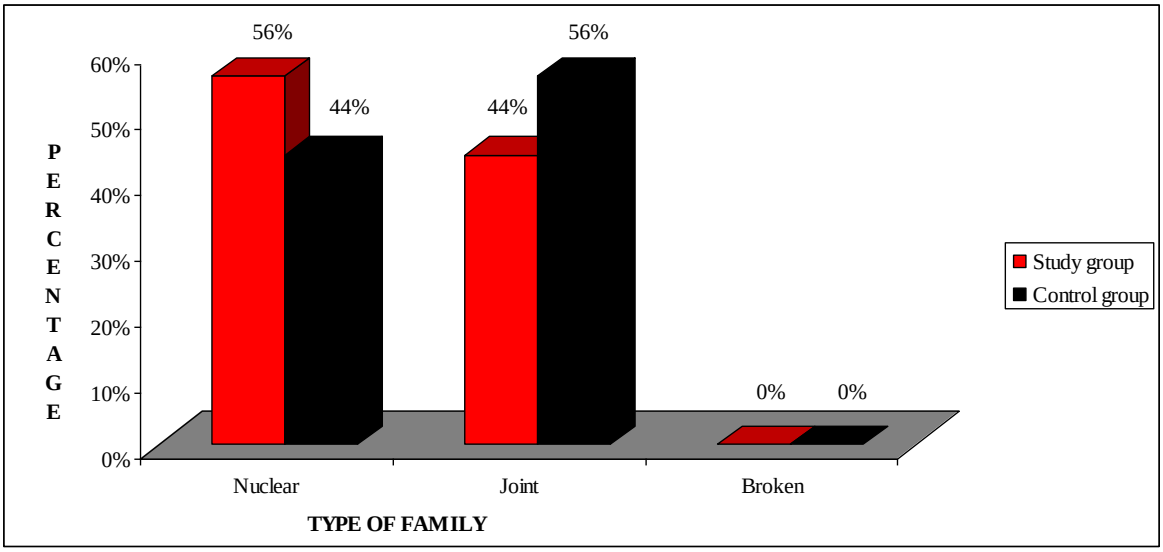

Fig 2.6 Percentage distribution of type of family among patients receiving intra muscular injection

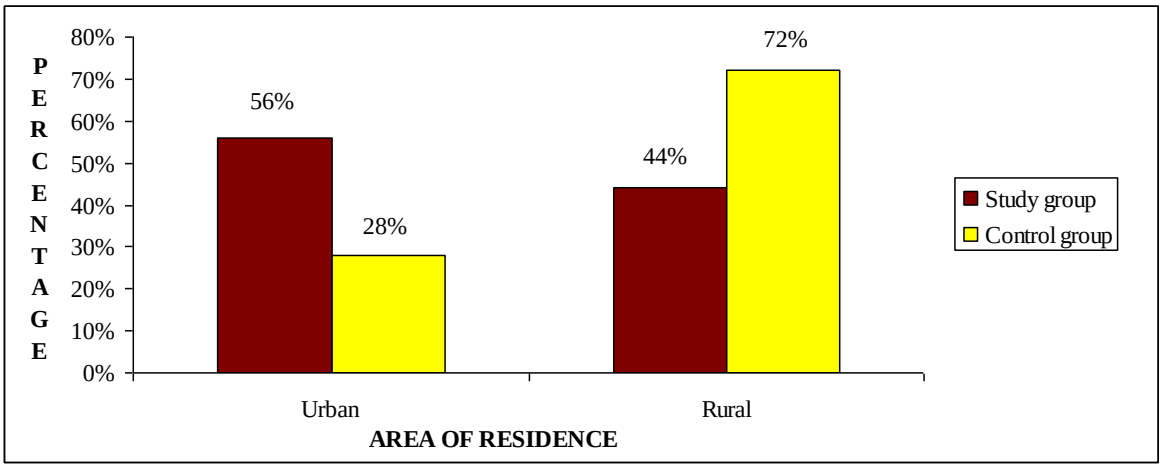

Fig 2.7 Percentage distribution of area of residence among patients receiving intra muscular injection

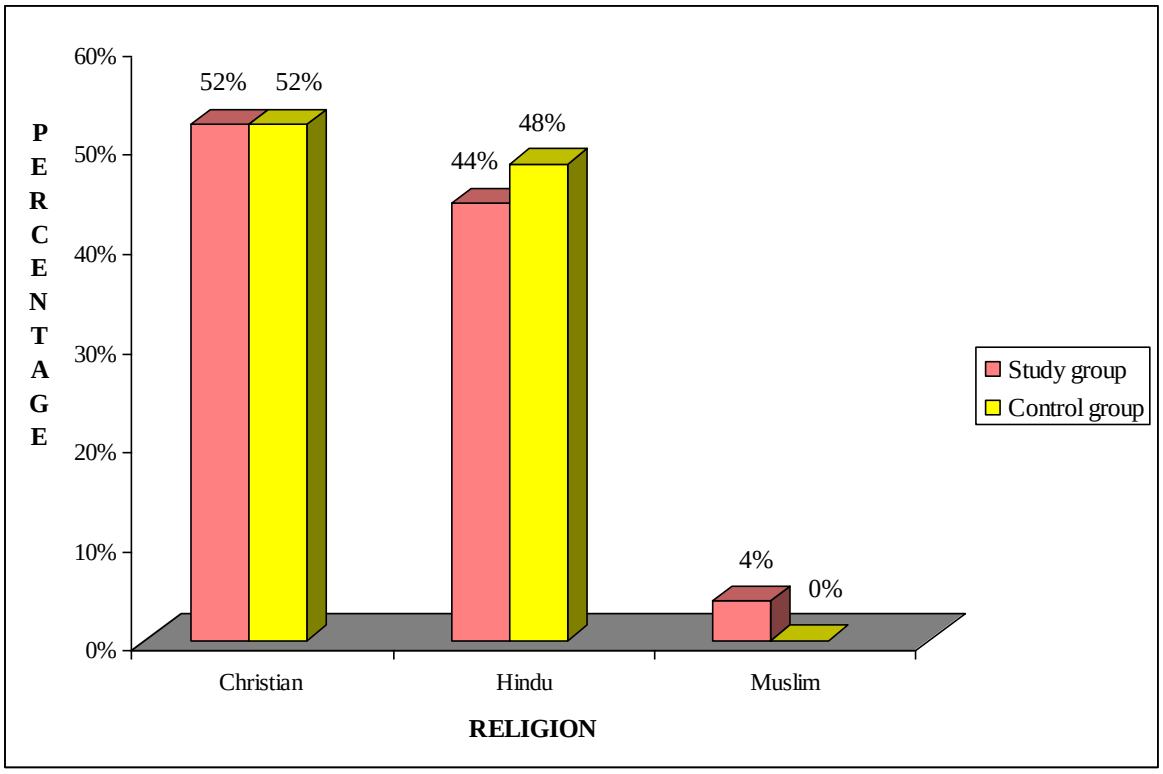

Fig 2.8 Percentage distribution of religion among patients receiving intra muscular injection

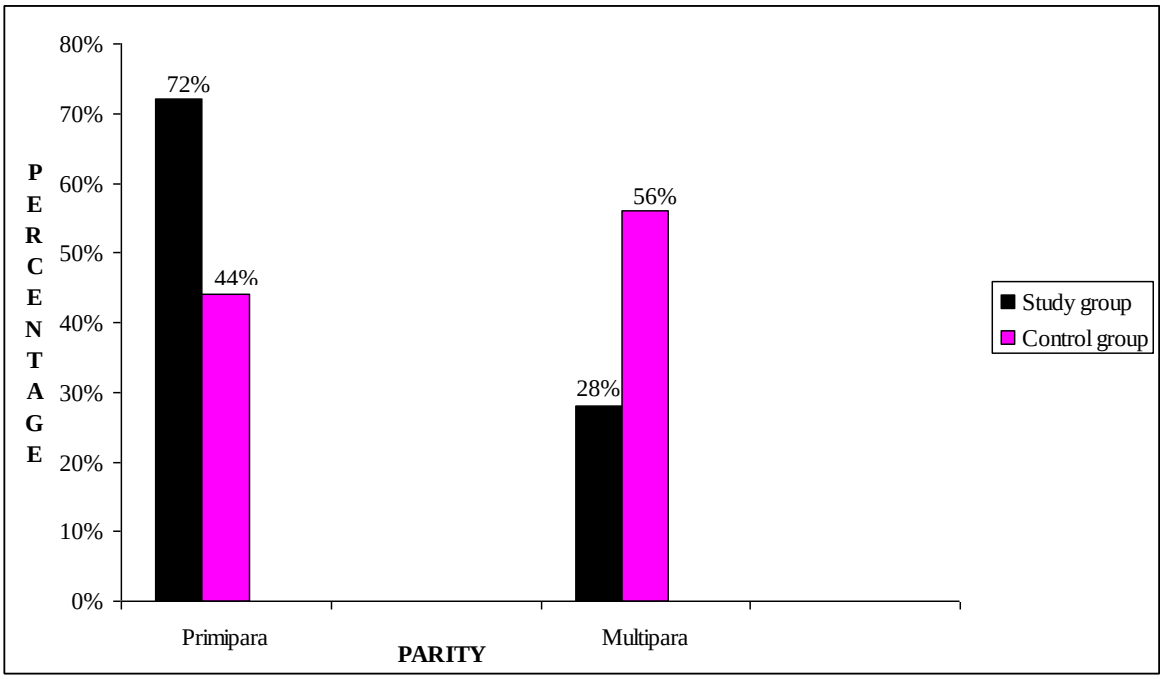

Fig 2.9 Percentage distribution of parity among patients receiving intra muscular injection

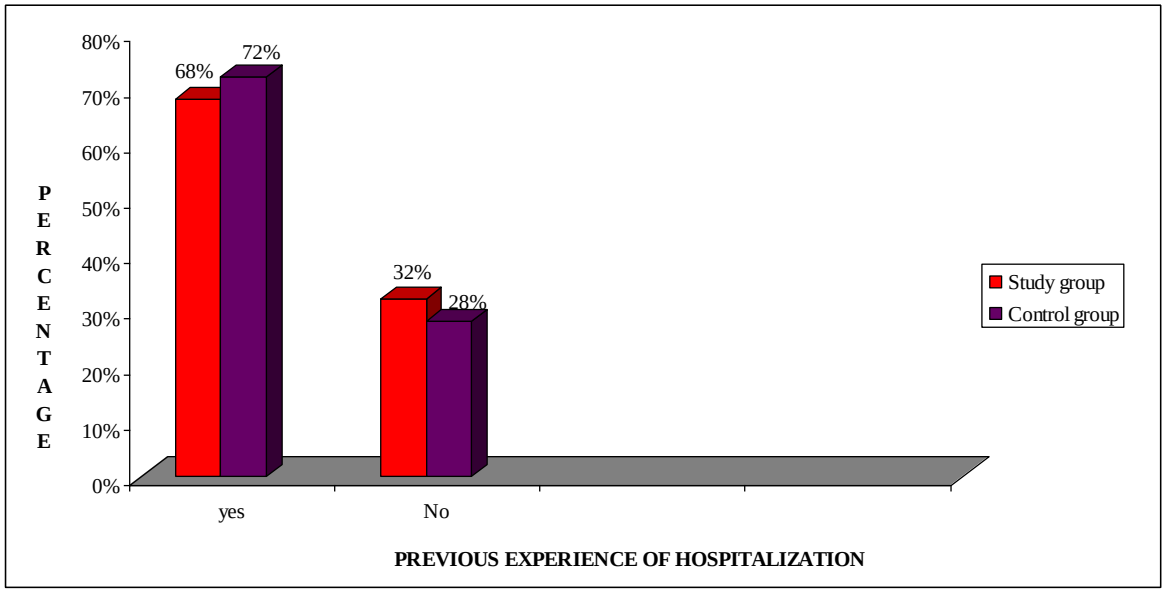

Fig 2.10 Percentage distribution of previous experience of hospitalization among patients receiving intra muscular injection

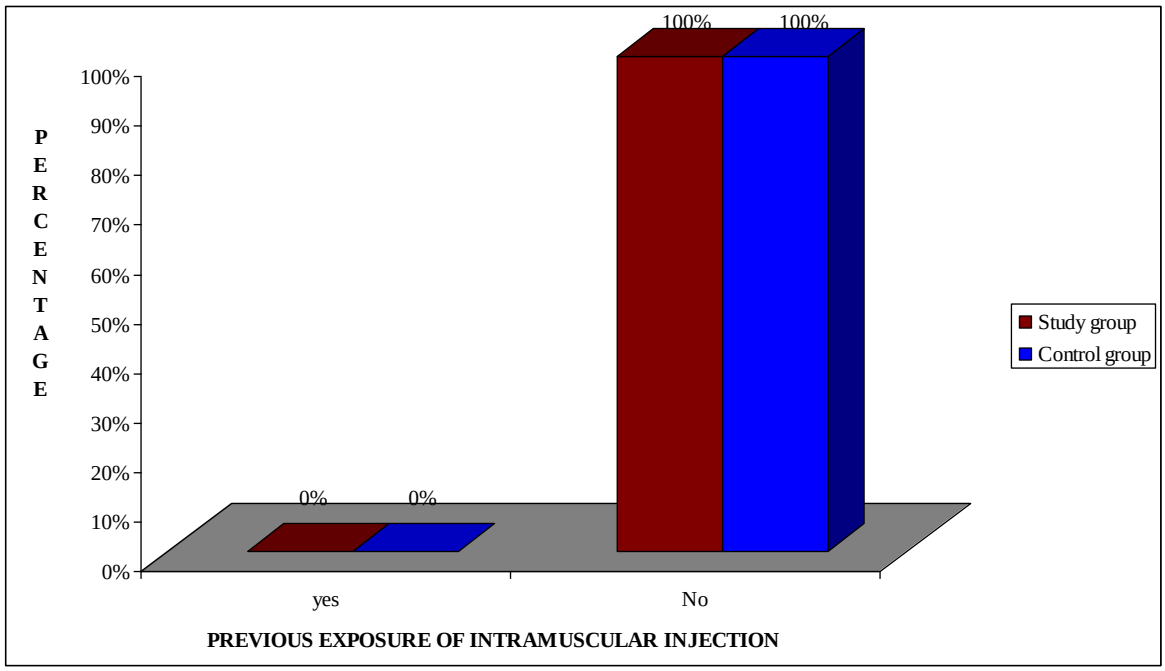

Fig 2.11 Percentage distribution of previous exposure of intramuscular injection among patients receiving intra muscular injection.

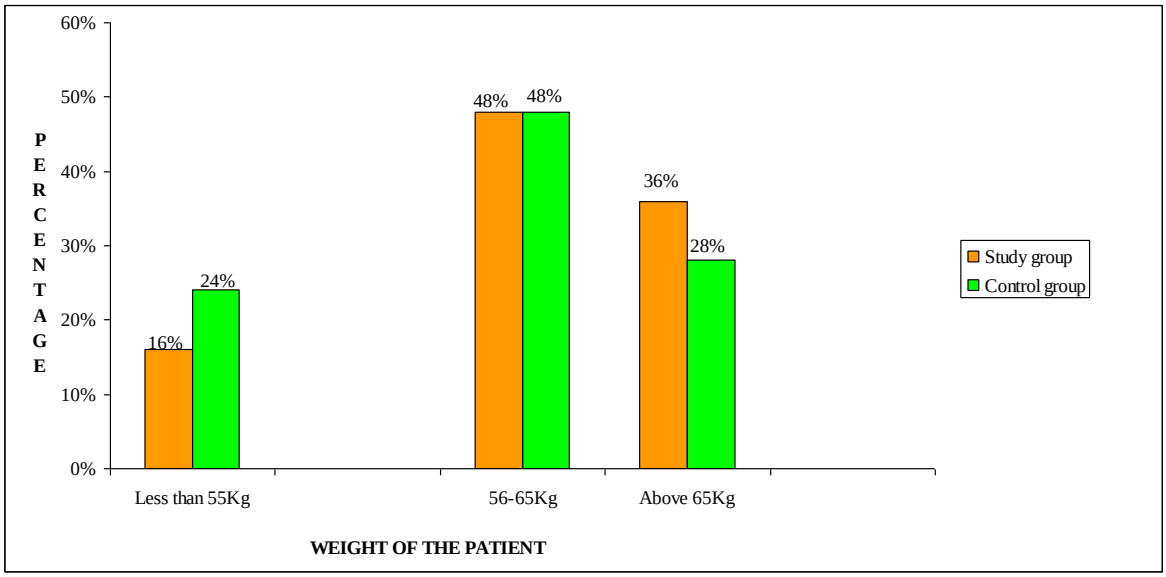

Fig 2.12 Percentage distribution of weight of the patient among patients receiving intra muscular injection

SECTION-B

LEVEL OF PAIN PERCEPTION AMONG PATIENTS RECEIVING INTRA MUSCULAR INJECTION IN STUDY GROUP AND CONTROL GROUP

Table 2.1: Post test frequency and percentage distribution of level of pain perception among patients receiving intra muscular injection in study and control group after intervention.

N=50

POST TEST											
S.No.	**Group**	**No pain**		**Mild pain**		**Moderate Pain**		**Severe pain**		**Worst pain**	
		f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1	**Study Group (n=25)**	0	0	23	92	2	8	0	0	0	0
2	**Control Group (n=25)**	0	0	1	4	20	80	4	16	0	0

.

Table 2.1 represents during post test, in study group none of them had no pain, 23(9%) of them had mild pain, 2(8%) of them had moderate pain none of them had severe pain and none of them had worst pain. In control group none had no pain, 1(4%) had mild pain, 20(80%) had moderate pain, 4(6%) had severe pain and none had worst pain.

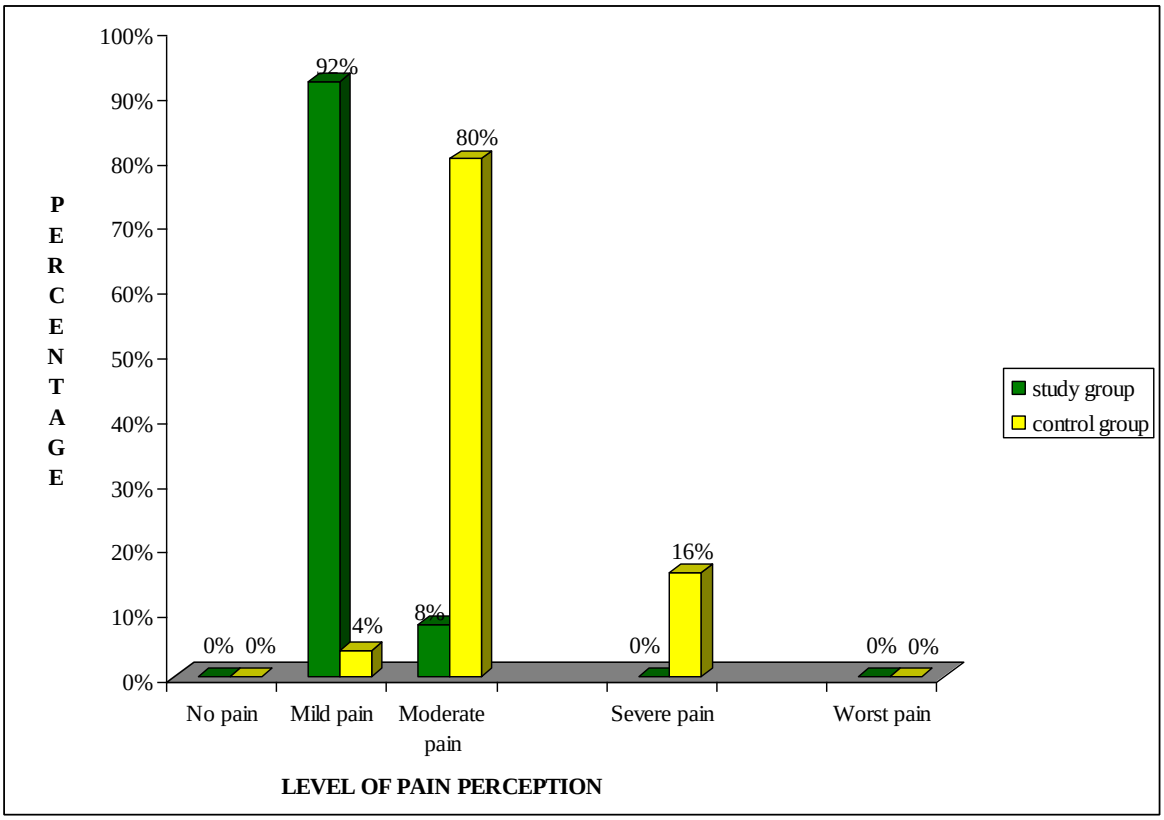

Fig 2.13: Percentage distribution of post test level of pain perception among patients receiving intra muscular injection.

SECTION-C
TESTING HYPOTHESES

COMPARISON OF POST TEST LEVEL OF PAIN PERCEPTION AMONG PATIENTS RECEVING INTRA MUSCULAR INJECTION IN STUDY GROUP AND CONTROL GROUP.

Table 3.1: comparison of mean, standard deviation and unpaired "t" test on post test level of pain perception among patients receiving intra muscular injection in study group and control group.

N=50

Variables	Group	Mean	SD	Unpaired 't' test
Level of pain perception	Study group n=25	2.24	0.81	10.13*
	Control group n=25	5.36	1.29	

Significant at p≤0.05

Table 3.1repreents the comparison of the mean, standard deviation and unpaired 't' test value on post test level of pain perception among patients receiving intra muscular injection in study group and control group. The mean score on level of pain perception among patients receiving intra muscular injection in study group was 2.24 with the standard deviation 0.81. In control group, the post test mean score was 5.36 with the standard deviation 1.29. The estimated unpaired "t" test value was 10.13* which was significant at p≤0.05.It shows that Helfer skin tap technique was effective and reduced the level of pain perception. Hence the research hypothesis was accepted.

SECTION D

ASSOCIATION BETWEEN THE POST TEST LEVEL OF PAIN PERCEPTION AMONG PATIENTS RECEIVING INTRA MUSCULAR INJECTION IN STUDY GROUP AND CONTROL GROUP WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.

Table 4.4: Association between the post test levels of pain perception among patients receiving intra muscular injection in study group with their selected demographic variables.

n=25

Study group													
S. No	**Demographic Variables**		**No pain**		**Mild pain**		**Moderate pain**		**Severe pain**		**Worst pain**		**Chi-square test χ^2**
			f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	
1	**Age**	**20-25 years**	0	0	12	48	1	4	0	0	0	0	**χ^2= 1.59 df=8 Table value=15.51**
		26-30 years	0	0	7	28	0	0	0	0	0	0	
		31-35 years	0	0	4	16	1	4	0	0	0	0	
2	**Education status**	**Illiterate**	0	0	0	0	0	0	0	0	0	0	**χ^2= 2.03 df=8 table value=15.51**
		School education	0	0	6	24	0	0	0	0	0	0	
		Graduate	0	0	17	68	2	8	0	0	0	0	
3	**Occupation**	**Sedentary worker**	0	0	8	32	2	8	0	0	0	0	**χ^2= 12.5 df=8 Table value=15.51**
		Moderate worker	0	0	14	56	0	0	0	0	0	0	
		Heavy worker	0	0	1	4	0	0	0	0	0	0	

4	**Monthly income**	**Rs. 5000-Rs. 10000**	0	0	8	32	1	4	0	0	0	0	**χ^2= 8.58** **df=8** **Table value=15.51**
		Rs.10001-Rs.15000	0	0	8	32	1	4	0	0	0	0	
		More than Rs.15000	0	0	7	28	0	0	0	0	0	0	
5	**Marital status**	**Married**	0	0	23	92	2	8	0	0	0	0	**χ^2= 0** **df=8** **Table value=15.51**
		Divorced	0	0	0	0	0	0	0	0	0	0	
		Widow	0	0	0	0	0	0	0	0	0	0	
6	**Type of family**	**Nuclear**	0	0	13	52	1	4	0	0	0	0	**χ^2= 0.031** **df=8** **Table value=15.51**
		Joint	0	0	10	40	1	4	0	0	0	0	
		Broken	0	0	0	0	0	0	0	0	0	0	
7	**Area of residence**	**Urban**	0	0	13	52	1	4	0	0	0	0	**χ^2= 0.031** **df=4** **Table value=9.49**
		Rural	0	0	10	40	1	4	0	0	0	0	
8	**Religion**	**Christian**	0	0	13	52	0	0	0	0	0	0	**χ^2= 2.76** **df=8** **Table value=15.51**
		Hindu	0	0	9	36	2	8	0	0	0	0	
		Muslim	0	0	1	4	0	0	0	0	0	0	

9	**Parity**	**Primipara**	0	0	17	68	1	4	0	0	0	0	**χ^2= 0.523 D df=4 Table value=9.49**
		Multipara	0	0	6	24	1	4	0	0	0	0	
10	**Previous experience of hospitalization**	**Yes**	0	0	16	64	1	4	0	0	0	0	**χ^2= 0.324 df=4 Table value=9.49**
		No	0	0	7	28	1	4	0	0	0	0	
11	**Previous exposure of intra muscular injection**	**Yes**	0	0	0	0	0	0	0	0	0	0	**χ^2= 0 df=4 Table value=9.49**
		No	0	0	23	92	2	8	0	0	0	0	
12	**Weight of the patient**	**Less than 55kg**	0	0	3	12	1	4	0	0	0	0	**χ^2= 2.73 df=8 Table value=15.51**
		56-65kg	0	0	12	48	0	0	0	0	0	0	
		Above 65kg	0	0	8	32	1	4	0	0	0	0	

Table 4.1 represents that in study group the calculated value of the selected demographic variables such as age, educational status occupation, monthly income, marital status, type of family, area of residence, religion, parity, previous experience of hospitalization, previous exposure of intra muscular injection and weight of the patient is lesser than the table value which indicates there was no significance association with level of pain perception and the demographic variables.

Table 4.2 Association between the post test level of pain perception among patients receiving intra muscular injection in control group with their selected demographic variables.

n=25

Control group													
S. No	**Demographic Variables**		**No pain**		**Mild pain**		**Moderate pain**		**Severe pain**		**Worst pain**		**Chi-square test**
			f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	
1	**Age**	**20-25 years**	0	0	0	0	7	28	1	4	0	0	**χ^2= 5.65 df=8 Table value=15.51**
		26-30 years	0	0	0	0	8	32	3	12	0	0	
		31-35 years	0	0	1	4	5	20	0	0	0	0	
2	**Education status**	**Illiterate**	0	0	0	0	0	0	0	0	0	0	**χ^2= 1.1 df=8 Table value=15.51**
		School education	0	0	0	0	6	24	2	8	0	0	
		Graduate	0	0	1	4	14	56	2	8	0	0	
3	**Occupation**	**Sedentary worker**	0	0	0	0	10	40	2	8	0	0	**χ^2= 0.97 df=8 Table value=15.51**
		Moderate worker	0	0	1	4	10	40	2	8	0	0	
		Heavy worker	0	0	0	0	0	0	0	0	0	0	

4	**Monthly income**	**Rs. 5000- Rs. 10000**	0	0	0	0	10	40	2	0	0	0	
		Rs.10001- Rs.15000	0	0	1	4	7	28	1	0	0	0	**χ^2= 25.06***
		More than Rs.15000	0	0	0	0	3	12	1	0	0	0	**df=8 Table value=15.51**
5	**Marital status**	**Married**	0	0	1	4	20	80	4	16	0	0	
		Divorced	0	0	0	0	0	0	0	0	0	0	**χ^2= 0 df=8 Table value= 15.51**
		Widow	0	0	0	0	0	0	0	0	0	0	
6	**Type of family**	**Nuclear**	0	0	1	4	8	32	2	8	0	0	
		Joint	0	0	0	0	12	48	2	8	0	0	**χ^2= 1.44 df=8 Table value= 15.51**
		Broken	0	0	0	0	0	0	0	0	0	0	
7	**Area of residence**	**Urban**	0	0	1	4	6	24	0	0	0	0	**χ^2= 4.17 df=4 table value=9.49**
		Rural	0	0	0	0	14	56	4	16	0	0	
8	**Religion**	**Christian**	0	0	1	4	10	40	2	8	0	0	
		Hindu	0	0	0	0	10	40	2	8	0	0	**χ^2= 0.96 df=8 Table value= 15.51**
		Muslim	0	0	0	0	0	0	0	0	0	0	

9	**Parity**	**Primipara**	0	0	0	0	8	32	3	12	0	0	**χ^2= 2.47 df=4 Table value=9.49**
		Multipara	0	0	1	4	12	48	1	4	0	0	
10	**Previous experience of hospitalization**	**Yes**	0	0	1	4	14	56	3	12	0	0	**χ^2= 0.53 df=4 Table value= 9.49**
		No	0	0	0	0	6	24	1	4	0	0	
11	**Previous exposure of intra muscular injection**	**Yes**	0	0	0	0	0	0	0	0	0	0	**χ^2= 0 df=4 Table value= 9.49**
		No	0	0	1	4	20	80	4	16	0	0	
12	**Weight of the patient**	**Less than 55kg**	0	0	0	0	5	20	1	4	0	0	**χ^2= 2.32 df=8 Table value= 15.51**
		56-65kg	0	0	1	4	10	40	1	4	0	0	
		Above 65kg	0	0	0	0	5	20	2	8	0	0	

Table 4.2 represents that in control group the calculated value of the selected demographic variables such as age, educational status occupation, marital status, type of family, area of residence, religion, parity, previous experience of hospitalization, previous exposure of intra muscular injection and weight of the patient is lesser than the table value which indicates there was not significant association with level of pain perception and the demographic variables. Monthly income was an association. Hence the research hypothesis (H_2) was rejected, except variable monthly income.

CHAPTER – V
DISCUSSION

This chapter deals with the discussion of the data analyzed based on the objective and hypotheses of the study. The problem statement "A study to assess the effectiveness of Helfer skin tap technique on pain perception among patients receiving intra muscular injection in selected Hospital, at Kanyakumari District." The discussion was based on the objectives and the hypotheses mentioned in this study.

Distribution of demographic variables of patients receiving intra Muscular injection in study group and control group.

The distribution of demographic variables on patients receiving intra muscular injection in study group and control group of which 25 patients were in study group and 25 patients were in control group. According to the age 13(52%) belongs to age group of 20 – 25 years, 7(28%) belongs to age group of 26 – 30 years, 5(20%) of patients receiving intra muscular in the age group of 31 – 35 years in study group. In control group 8(32%) belongs to age group of 20 – 25 years, 11(44%) belongs to age group of 26 – 30 years, 6(24%) belongs to age group of 31 – 35 year.

With regard to educational status, none were illiterate, 6(24%) were in school education, 19(76%) were graduate in study group. Likewise in control group none were illiterate,8(32%) were school education, 17(68%) were graduate.

Regarding to occupation on study group, 10(40%) were sedentary workers, 14(54%) were moderate workers, 1(4%) were heavy workers. Likewise in control group 12(48%) were sedentary workers, 13(52%) were moderate workers, none were heavy worker.

With regard to income on study group, 9(36%) of them are Rs 5000 – Rs 10000, 9(36%) of them are Rs 10001 – Rs 15000, 7(28%) of them are more than Rs

15000.Likewise in control group 12(48%) of them are Rs 5000 – Rs 10000, 9(36%) of them are Rs 10001 – Rs 15000, 4(16%) of them are more than Rs 15000.

Analyzing to marital status on study group, 25(100%) were married, none were divorced, none were window. Likewise in control group 25(100%) were married, none were divorced, none were window.

Regarding to type of family on study group 14(56%) of them are nuclear family, 11(44%) of them are joint family, 0% of them are broken family. whereas in the control group 11 (44%) of them are nuclear family, 14(56%) of them are joint family, none of them are broken family.

Analyzing to area of residence on study group, 14(56%) of them are urban, 11(44%) of them are rural. Whereas in the control group 7(28%) of them are urban, 18(72%) of them are rural.

Considering to religion in study group, 13(52%) of them are Christian, 11(44%) of them are Hindu, 1(4%) of them are Muslim. Whereas in the control group, 13(52%) of them are Christian, 12(48%) of them are Hindu, 0% of them are Muslim.

With regards to parity on study group, 18(72%) were primi para, 7(28%) were multi para. Whereas in control group 11(44%) were primi para, 14(56%) were multi para.

Analyzing to pervious experience of hospitalization on study group, 17(68%) of them are yes, 8(3%) of them are no. Whereas in the control group 18(72%) of them are yes, 7(28%) of them are no in control group.

Regarding to pervious exposure of intra muscular injection in study group, none were yes, 25(100%) were no. Whereas in the control group, 0% were yes, 25(100%) were no in control group.

With regards to weight of the patient in study group, 4(16%) were less than 55kg, 12(48%) were 56 – 65 kg, 9(36%) were above 65 kg. Whereas in the control group 6(24%) were less than 55 kg, 12(48%) were 56 – 65 kg, 7(28%) were above 65 kg in control group.

The first objective was to assess the post test level of pain perception among patients receiving intra muscular injection in study group and control group.

During post test, in study group none of them had no pain, 23(9%) of them had mild pain, 2(8%) of them had moderate pain none of them had severe pain and none of them had worst pain. In control group none had no pain, 1(4%) had mild pain, 20(80%) had moderate pain, 4(6%) had severe pain and none had worst pain.

The first objectives was supported by the study of Shimmy, (2010) conducted a study to assess the skin tap technique on pain perception among adult patients receiving intra muscular analgesic injection in Chandigarh. The quasi experimental research design was used. The pain score was assessed by using numerical pain scale. It was observed that mean pain score of control group was 2.94±1.68 and the study group was 2.08± 1.26. In this study concluded that the perception of pain intensity is less when intra muscular injections are administered using Helfer skin tap technique rather than routine technique.

The second objective was to evaluate the effectiveness of Helfer skin tap technique level of pain perception among patients receiving intra muscular injection in study group and control group:

In the post test, the study group showed a mean value of 2.24 with standard deviation of 0.81 and the control group showed a mean value of 5.36 with a standard deviation of 1.29. The calculated unpaired‘t’ test value was 10.13* which is significant at $p \leq 0.05$.

This showed a significant difference in the post test level of pain perception between study group and control group. It shows that Helfer skin tap technique was effective in reduced the level of pain perception. Hence the hypothesis(H_1) was accepted.

The second objective was supported by the study **Jose Rose Mary.et al., (2012)** A study was conducted on the effectiveness of skin tap technique on reducing pain response

associated with intra muscular injection among the patients in Banglore. The total sample size was 60 patients, each 30 patient in study group and control group. The post test only control group design is used for the study. The pain was assessed by 0-10 numerical pain scale. The statistical analysis of the pain response showed that 80% patients in study group and 16% patients in control group had mild pain. The study concluded that the skin tap technique was more effective to reduce the intra muscular injection pain.

The third objective was to find out the association between the post test level of pain among patients receiving intra muscular injection with their selected demographic variables in study group and control group.

It shows that, in study group the calculated value of demographic variables such as age, educational status occupation, monthly income, marital status, type of family, area of residence, religion, parity, previous experience of hospitalization, previous exposure of intra muscular injection and weight of the patient is lesser than the table value which indicates there was no significance association with level of pain perception and the demographic variables.

In control group calculated value of demographic variables such as age, educational status occupation, marital status, type of family, area of residence, religion, parity, previous experience of hospitalization, previous exposure of intra muscular injection and weight of the patient is lesser than the table value which indicates there was not significant association with level of pain perception and demographic variables. Monthly income was an association. Hence the research hypothesis (H_2) was rejected, except variable monthly income.

The chapter deals with the discussion of the study with reference to the objectives. Among the two objectives and one hypothesis have been accepted, and one objective and one hypothesis was not accepted.

CHAPTER VI
SUMMARY, CONCLUSION, LIMITATION, NURSING IMPLICATIONS AND RECOMMENDATIONS

This chapter deals with the summary of the study, and conclusion. It clarifies nursing implications for nursing practice, limitations and recommendations for further research in the field.

SUMMARY

The aim of the study was to assess the effectiveness of Helfer skin tap technique on level of pain perception among patients receiving intra muscular injection. A review of related literature enabled the researcher to develop the conceptual frame work and methodology for the study. The conceptual framework adopted for this study was based on Einstein Widenbach's Prescriptive Helping Art of clinical nursing theory (1964). Quantitative research approach was used. Quasi experimental design was adopted to evaluate the effectiveness of Helfer skin tap technique on level of pain perception among patients receiving intra muscular injection. The study was conducted in PPK Hospital Marthandam. The purposive sampling technique was used to select 25 samples for study group and 25 samples for control group.

Data collection was done by using the demographic variables and numerical pain scale. Helfer skin tap technique was administered for study group. Post test was done after the intra muscular injection in both the group. The data gathered were analyzed by descriptive and inferential statistics method and interpretation were done on the basis of the objectives of the study. The level of significance was assessed by $p \leq 0.05$ to test the hypotheses.

FINDINGS

The major finding of the study was summarized as follows.

The distribution of demographic variables on patients receiving intra muscular injection in study group and control group of which 25 patients were in study group and 25 patients were in control group. According to the age 13(52%) belongs to age group of 20 – 25 years, 7(28%) belongs to age group of 26 – 30 years, 5(20%) of patients receiving intra muscular in the age group of 31 – 35 years in study group. In control group 8(32%) belongs to age group of 20 – 25 years, 11(44%) belongs to age group of 26 – 30 years, 6(24%) belongs to age group of 31 – 35 year.

With regard to educational status, none were illiterate, 6(24%) were in school education, 19(76%) were graduate in study group. Likewise in control group none were illiterate,8(32%) were school education, 17(68%) were graduate.

Regarding to occupation on study group, 10(40%) were sedentary workers, 14(54%) were moderate workers, 1(4%) were heavy workers. Likewise in control group 12(48%) were sedentary workers, 13(52%) were moderate workers, none were heavy worker.

With regard to income on study group, 9(36%) of them are Rs 5000 – Rs 10000, 9(36%) of them are Rs 10001 – Rs 15000, 7(28%) of them are more than Rs 15000.Likewise in control group 12(48%) of them are Rs 5000 – Rs 10000, 9(36%) of them are Rs 10001 – Rs 15000, 4(16%) of them are more than Rs 15000.

Analyzing to marital status on study group, 25(100%) were married, none were divorced, none were window. Likewise in control group 25(100%) were married, none were divorced, none were window.

Regarding to type of family on study group 14(56%) of them are nuclear family, 11(44%) of them are joint family, 0% of them are broken family. whereas in the control group 11 (44%) of them are nuclear family, 14(56%) of them are joint family, none of them are broken family.

Analyzing to area of residence on study group, 14(56%) of them are urban, 11(44%) of them are rural. Whereas in the control group 7(28%) of them are urban, 18(72%) of them are rural.

Considering to religion in study group, 13(52%) of them are Christian, 11(44%) of them are Hindu, 1(4%) of them are Muslim. Whereas in the control group, 13(52%) of them are Christian, 12(48%) of them are Hindu, 0% of them are Muslim.

With regards to parity on study group, 18(72%) were primi para, 7(28%) were multi para. Whereas in control group 11(44%) were primi para, 14(56%) were multi para.

Analyzing to pervious experience of hospitalization on study group, 17(68%) of them are yes, 8(3%) of them are no. Whereas in the control group 18(72%) of them are yes, 7(28%) of them are no in control group.

Regarding to pervious exposure of intra muscular injection in study group, none were yes, 25(100%) were no. Whereas in the control group, 0% were yes, 25(100%)were no in control group.

With regards to weight of the patient in study group, 4(16%) were less than 55kg, 12(48%) were 56 – 65 kg, 9(36%) were above 65 kg. Whereas in the control group 6(24%) were less than 55 kg, 12(48%) were 56 – 65 kg, 7(28%) were above 65 kg in control group.

During post test, in study group none of them had no pain, 23(9%) of them had mild pain, 2(8%) of them had moderate pain none of them had severe pain and none of them had worst pain. In control group none had no pain, 1(4%) had mild pain, 20(80%) had moderate pain, 4(6%) had severe pain and none had worst pain.

The mean score on level of pain perception among patient receiving intramuscular injection in study group was 2.24 and in control group was 5.36. The estimated unpaired "t" value was 10.13* which is significant at $p \leq 0.05$. It shows that Helfer skin tap technique

was effective and reduced level of pain perception. Hence the research hypothesis (H_1) was accepted.

In study group the calculated value of demographic variables such as age, educational status occupation, monthly income, marital status, type of family, area of residence, religion, parity, previous experience of hospitalization, previous exposure of intra muscular injection and weight of the patient is lesser than the table value which indicates that there was no significant association with level of pain perception and the demographic variables.

In control group calculated value of demographic variables such as age, educational status occupation, marital status, type of family, area of residence, religion, parity, previous experience of hospitalization, previous exposure of intra muscular injection and weight of the patient is lesser than the table value which indicates there was no significant association with level of pain perception and demographic variables. Monthly income was an association. Hence the research hypothesis (H_2) was rejected expect variable monthly income.

CONCLUSION

The study was done to evaluate the effectiveness of Helfer skin tap technique on pain perception among patients receiving intra muscular injection in selected hospital. The mean score on level of pain perception in study group was 2.24 and in control group was 5.36. The unpaired t value was 10.13* which is non significant at $p \leq 0.05$. It shows that Helfer skin tap technique was effective in reducing the level of pain perception. From the result of the study, it was concluded that providing Helfer skin tap technique was very effective in reducing pain perception. Therefore the investigator felt that more importance should be given for Helfer skin tap technique to reduced pain perception among patients receiving intra muscular injection.

NURSING IMPLICATIONS

The findings of the study enables us to conclude that Helfer skin tap technique was effective to reduced the pain perception among patients receiving intra muscular injection which is a vital concern in the field of nursing profession including nursing practice, nursing administration, nursing education and nursing research.

NURSING PRACTICE

- Nurses should develop their knowledge regarding the benefits of Helfer skin tap technique among patients receiving intra muscular injection.
- Nurses should develop skills in implementing Helfer skin tap technique.
- Nurses should create awareness on benefits of Helfer skin tap technique, promote and encourage practicing Helfer skin tap technique among patients receiving intra muscular injection.
- Nurses working in hospitals and nursing home settings can implement Helfer skin tap technique as a significant means of reducing intra muscular injection pain.

NURSING EDUCATION

- Nursing students should receive adequate training regarding Helfer skin tap technique.
- Workshops or conferences for students should be conducted regarding the use of Helfer skin tap technique, in day today nursing practice.
- Nurse educators should ensure that Helfer skin tap technique is included in the curriculum from the basic level of nursing education.
- Nurse educator should provide the students with adequate exposure to intra muscular injection and Helfer skin tap technique.

NURSING ADMINISTRATION

- Nurse administrator can assist in implementing Helfer skin tap technique on public health awareness in hospitals.
- Administrative staff should understand the needs of patient receiving intra muscular injection.
- Nursing administrator can organize conferences, seminars, and workshop for nurses working in community to encourage a positive attitude on Helfer skin tap technique.
- Request should be designed by nurse to the institutions to implement Helfer skin tap technique to patient receiving intra muscular injection.

NURSING RESEARCH

- Researcher can work on various methods to reduce the intra muscular injection pain.
- Nurses can conduct research for further clarifications on the benefits of Helfer skin tap technique among patient receiving intra muscular injection.
- Nurses should be encouraged to conduct more research on the effect of Helfer skin tap technique.
- Large scale study should be conducted on benefits of Helfer skin tap technique among patient receiving intra muscular injection and disseminate the findings of research through conferences, workshops, seminars and publishing in nursing journals.
- A qualitative study can be adopted to find out the practice and factors influencing intra muscular injection.

LIMITATION

- This study did not generalize the effectiveness of Helfer skin tap technique for all injection sites.

RECOMMENDATIONS

The following steps can be undertaken to strengthen the study.

- A study can be conducted among large sample.
- A study can be conducted for the other intra muscular injection.
- A study can be conducted to assess the knowledge of nurses regarding Helfer skin tap technique among patient receiving intra muscular injection.
- A study can be conducted for the other intra muscular injection site.

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ANNEXURE –I

LETTER SEEKING PERMISSION CONDUCT THE STUDY

St. XAVIER'S CATHOLIC COLLEGE OF NURSING
Chunkankadai, Nagercoil, Kanyakumari, Tamil Nadu – 629 003.
Tel: College: 04651 - 231740 Cell: 9840307884, 8012524043; Fax: 04651 - 230914
E – mail : xaviers_nursing@yahoo.com; Website: www. xaviersnsg.edu.in

Dr. A. REENA EVENCY, M.Sc (N)., Ph.D.
Principal

07.11.2017

To

The Director

PPK Hospital,

Marthandam.

Respected Sir / Madam,

Ms. Shajitha N.R. is a student of M.Sc. Nursing program in our college from Medical Surgical nursing department. She is conducting study on **"A study to assess the effectiveness of Helfer skin tap technique on pain perception among patient receiving intra muscular injection in selected hospital, Kanyakumari District"**.

This is for the research project to be submitted to the Tamil Nadu Dr. M.G.R. Medical University, Chennai in partial fulfilment of University requirement for the award of Post Basic B.Sc. (Nursing).

As part of her study she needs to observe the pain perception during IM Injection Procedure patients those who receiving form your hospital. So permission may kindly be granted for her to conduct the study at your esteemed hospital. She will abide by the rules and regulations of your hospital.

Thanking you.

Yours Faithfully,

PRINCIPAL
ST. XAVIER'S CATHOLIC COLLEGE OF NURSING
CHUNKANKADAI
NAGERCOIL - 629 003
K. K. DIST.

ANNEXURE II

LETTER GRANTING PERMISSION TO CONDUCT THE STUDY

PPK HOSPITAL

Main Road. Marthandam - 629 165
Ph:04651-270135, 273245, 273255
E-mail : ppkvijayakumar@gmail.com
Website : www.ppkhospital.com

37 Years of Excellence

31/12/2017

Ref.No.PPK/L60/2017

Project Completion Certificate

This is to Certify that **Ms. Shajitha** (M. Sc Nursing II year) student of St. Xavier Catholic college of Nursing, Chunkankadai post, Kanyakumari District. She has successfully completed the data collection in our hospital for the project work on **"A study to assess the effectiveness of Helfer Skin tap Technique on pain perception among patient receiving intra muscular injection at PPK Hospital of Kanyakumari district"** during the period from 01-12-2017 to 31-12-2017.

P.P.K. HOSPITAL PIN : 629 165 MARTHANDAM

Administrative Officer

A. MATHIVANAN M.Sc
ADMINISTRATIVE OFFICER
PPK HOSPITAL
MARTHANDAM - 629 165

QUALITY HEALTH CARE WITHIN YOUR REACH

ANNEXURES III

LETTER SEEKING EXPRESS OPINION FOR THE VALIDITY OF THE TOOL

From

Ms.N.R .Shajitha,

M.Sc. Nursing II year,

St. Xavier's Catholic College of Nursing,

Chunkankadai.

To

Respected / Madam,

Sub: Requisition to expert opinion and suggestion for the content validity.

I N.R. SHAJITHA M.Sc., Nursing II year student of St.Xavier's Catholic College Of Nursing, Chunkankadai, has selected the following topic," **A Study to assess the effectiveness of Helfer skin tap technique on pain perception among patients receiving intramuscular injection in selected hospital at Kanyakumari District''** for my dissertation to be submitted to Tamilnadu Dr.M.G.R Medical University in the partial fulfillment of the requirement for award of Master of science in Nursing.

I request you to go through the items and give your valuable suggestions and opinions to develop the content validity of the tool. Kindly suggest modifications, addition and deletions if any in the remarks column.

Thanking you,

Place: Chunkankadai

Date; Yours sincerely,

N.R.Shajitha.

ENLOSURE:

- Problem statement ,objectives, and hypotheses of the study
- Demographic Data.
- Assessment of Visual analog pain scale
- Evaluation Performa.

ANNEXURE IV

EVALUATION CRITERIA CHECKLIST FOR VALIDATION

Instructions:

The expert is requested to go through the following criteria for evaluation. Three columns are given for responses and a column for remarks. Kindly please tick mark ( ) in the appropriate columns and give remarks.

Interpretation column:

Column I- meets the criteria.

Column II- partially meets the criteria.

Column III-does not meet the criteria.

S.NO	CRITERIA	1	2	3	REMARKS
1.	Scoring -adequacy. - clarity -simplicity.				
2.	**Content** -logical sequence -adequacy -relevance				
3.	**Language** -appropriate -clarity -simplicity				
4.	**Practicability** -easy to score -precise -utility				

Any other suggestion:

Signature:

Name:

Designation:

Address:

CRITERIA CHECK LIST FOR VALIDATION OF THE TOOL

Instructions:

Kindly review the demographic data for patient receiving intra muscular injection. Kindly give your suggestion regarding the accuracy, relevance and appropriateness of the content. Kindly place a tick mark ( ) against specific columns.

PART- I

VALIDATION OF DEMOGRAPHIC DATA

Item	Very relevant	Relevant	Need for modification	Not relevant	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

PART-II

Validation of numerical pain scale

Item	Very relevant	Relevant	Need for modification	Not relevant	Remarks
NO PAIN					
MILD PAIN					
MODERATE PAIN					
SEVERE PAIN					
WORST PAIN					

ANNEXURE-V

LIST OF EXPERTS VALIDATED THE TOOL

1. **Dr. Suresh** M.B.B.S., M.D.
   Manju Hospital,
   Marthandam, Kanyakumari District.

2. **Mrs.Angel Priya, M.Sc.(N),**
   Principal,
   CBH College of Nursing,
   Nagercoil, Kanyakumari District.

3. **Mrs.Amuthu, M.Sc.(N),**
   Vice Principal,
   P.S. College of Nursing,
   Thalakulam, Kanyakumari District.

4. **Mrs.Sheeba M.Sc.(N),**
   Professor,
   Christian College Of Nursing,
   Neyyoor, Kanyakumari District.

5. **Mrs.Moona M.Sc.(N),**
   Professor in Medical Surgical Nursing,
   Christian College Of Nursing,
   Neyyoor, Kanyakumari District.

ANNEXURE VI

TOOL FOR DATA COLLECTION

PART-I

DEMOGRAPHIC DATA

1. Age
    a) 20-25 years
    b) 26-30 years
    c) 31- 35 years ( )

2. Educational status
    a) Illiterate
    b) School education
    c) Graduate ( )

3. Occupation
    a) Sedentary worker
    b) Moderate worker
    c) Heavy worker ( )

4. Monthly Income
    a) Rs.5000 –Rs.10000
    b) Rs.10001-Rs.15000
    c) More than Rs.15000 ( )

5. Marital status
    a) Married
    b) Divorced
    c) Widow ( )

6. Type of family

d) Nuclear

e) Joint

c) Broken ( )

7. Area of Residence

a. Urban

b. Rural

( )

8. Religion:

c. Christian

d. Hindu

e. Muslim ( )

9. Parity:

f. Primipara

g. Multipara ( )

10. Previous experience of hospitalization

a) Yes

b) No ( )

If yes reason:

11) Previous exposure of intramuscular injection:

a) Yes

b) No ( )

If yes reason:

12) Weight of the patient:

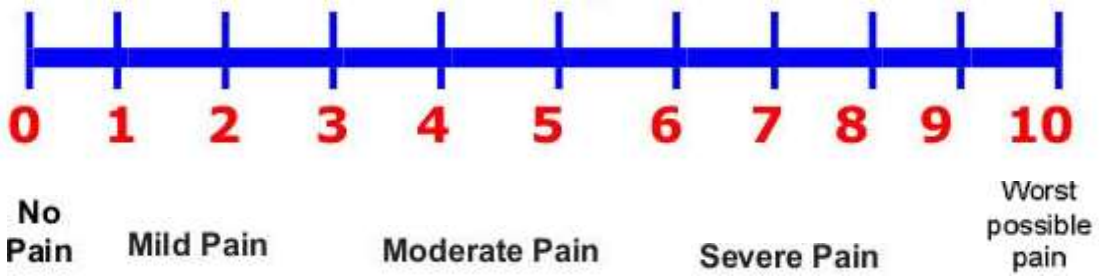
a) Less than 55kg

b) 56-65kg

c) Above 65 kg ( )

PART –II

Numeric pain scale



Scoring:

0-No pain

1-3 Mild pain

4-6 Moderate pain

7- 9 Severe pain

10 Worst pain

ANNEXURE VII

Table 3.2 Data collection period, Number of sample and Method of sample selection.

S.NO	Date	Number of samples		Method of sample selection
		Study group	Control group	
1.	03-12-2017	1	-	Purposive sampling technique
2.	04-12-2017	-	2	
3.	06-12-2017	9	-	
4.	07-12-2017	-	3	
5.	08-12-2017	4	-	
6.	09-12-2017	-	1	
7.	11-12-2017	2	-	
8.	12-12-2017	-	3	
9.	13-12-2017	3	-	
10.	14-12-2017	-	2	
11.	15-12-2017	3	-	
12.	16-12-2017	-	2	
13.	18-12-2017	1	-	
14.	19-12-2017	-	1	
15.	20-12-2017	2	-	
16.	21-12-2017	-	2	
17.	22-12-2017	-	3	
18.	27-12-2017	-	3	

19.	28-12-2017	-	3	

ANNEXURE X

PROCEDURE FOR HELFER SKIN TAP TECHNIQUE

DEFINITION:

Helfer skin tap technique is the administration of intra muscular injection by tapping the injection site by using palmer aspect of finger and inserting the needle with out the feeling of pain and three counts, removing the needle.

PURPOSES:

- To alleviate the pain.
- To improve superficial vasodilatation.
- To bring about the relaxation of muscle.
- To reduce needle anxiety.
- To give anesthetic effect.

MECHANISMS OF HELFER SKIN TAP TECHNIQUE:

The mechanism of Helfer skin tap technique is Gate control theory. In Helfer skin tap technique while doing tapping before intra muscular injection the nervous system will shut down the sensory gate and the pain sensation of the injection will not reach the brain. So the injection pain goes unnoticed.

Ronald Meizack and Patrick Wall (1965) the nerve fibers with smaller diameter carry pain stimuli through the gate mechanism present in spinal cord. But, the nerve fibers with large diameter, which carry other stimuli such as touch, pass through the same gate. The larger nerves inhibit the transmission of pain signals by smaller nerves through the gate.

ARTICLES:

A clean tray containing

S.No.	Articles	Purpose
1.	Syringes and needles of appropriate size	There should be minimum two needles. One to withdraw the medicine from the ampule and other one to administer the injection.
2.	Sterile cotton ball	To clean the skin at the site of injection.
3.	Spirit in a container	To clean the skin.
4.	Kidney tray	To receive the waste.

PROCEDURE:

- Patients should be identified as per inclusion and exclusion criteria.
- Check the client's identification and condition.
- Explain to the client about the purpose and the procedure. To obtain oral consent from the patient.
- Collected all the articles required near to the patient side.
- Wash hands.
- Provided privacy to the patient.
- Loaded the medication from an ampule.
- Placing the patient in proper position.
- Located correct site by using landmarks.(Dorso gluteal site)
- Cleaned the injection site with spirit swab to remove the surface bacteria.
- After preparing the skin with spirit swab, the uncapped syringe to be held in the dominant hand and the nondominant hand tap the muscle which intended to use the palmer aspect of the fingers 16 times before the insertion. Immediately after skin tapping insert the needle at a 90 degree angle into the muscle.

- After inserting the needle, aspirate to prevent injection into a vessel as per usual routine, inject the medication slowly and remove the needle by count of 1 to 3.
- Assessed the post test level of pain perception within one minute of administration of injection by using the numerical pain scale.
- Disposed of the needle in a puncture proof container and syringe in the container.
- Wash hands.